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Cycles of engagement: how public sector clients and their consultants engage on IT projects

Thesis submitted in accordance with the requirements of
The Open University
for the degree of Doctor of Philosophy

by
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BA MBA MRes
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Abstract

The aim of this thesis is to investigate how public sector clients engage with external clients on information technology projects. It does so by gathering documentary and interview information from clients and consultants on five public sector IT projects. The data were analysed using thematic and template analysis, resulting in a potential model of how project participants build engaged relationships.

Little research has investigated the client-consultant relationship on IT projects and a literature review revealed little theoretical basis to model engagement between participants arriving new to a project with no pre-existing relationships. By drawing on related literature and qualitative research data, the thesis develops a conceptual model of engagement with components that explain engaged relationships in terms of interaction between conditions and behaviours. Emerging behaviours are identified as sharing, sense making and adapting and these behaviours arise from conditions of environment, participants and expertise. Sharing and sense making behaviours reinforce each other, and lead to adapting, and a consequence of adapting is the potential to change conditions. Adapting conditions alters behaviours, which in turn can alter conditions, thus implying that once started, engagement is a dynamic self-replicating phenomenon with cycles that a manager or consultant can identify and alter for the benefit of the project.

The research contributes to theory by offering an understanding of the phenomenon of engagement between participants on projects, demonstrating the self-reinforcing role of conditions and behaviours and adding to theories of client-consultant relationships. The research findings offer consultants and their clients a means to identify how they can deliberately alter engagement to improve a project's process.

Acknowledgements

The journey to achieve a PhD is renowned for being a long and arduous marathon. Decades ago, I set myself this target, before I had even a first degree, and many people have helped me on the long way with practical and emotional encouragement.

The most recent support has of course come from my two supervisors, Liz Daniel and Richard Holti. They have encouraged, berated and trained me through many exciting and intellectual conversations. I've enjoyed their realistic, enthusiastic support and their complementary approaches so that my research developed in ways I'd never have guessed three years ago - I know I'm lucky to have had them as my supervisory team.

I thank Geoff Mallory for accepting my original naïve proposal for the Masters in Research Methods and then allowing me to continue onto the doctorate. What faith the man has! I thank Shelagh Coleman for her practical help in the first couple of years. I thank my fellow OUBS students Linda, Dan, Dannie, Tom, Sue, Ross, Quiran, Sardar and others for our coffee-time seminars where discussion has ranged from soccer to supervision, from cricket to critical realism. They've helped me get alternative angles on progress and research. I thank also Minh, LizT and other unseen commentators on the PhD blog I've been writing for the last four years because they have given me encouragement in the process.

A big thank you goes to my anonymous participants for providing that all-important access to their organisations, for giving me their time to provide insights to their experiences of IT projects. Without them, I wouldn't be writing this.

I not so sadly set aside my domestic duties to complete this research, so I thank Cherry who did the cleaning, and Adrian who did the cooking and shopping while I typed. Amongst my relatives, I thank Andrew, Peter, Antony and Philip, for reading and feeding back on earlier drafts of this thesis. I thank my late husband too – we used to talk about IT project management and the public sector client. To him I owe the original idea for the research.

Contents

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1 Introduction

This thesis investigates how public sector clients engage with their consultants and suppliers on information technology projects. This first chapter explains the background to the research, its rationale and contribution to knowledge. The methodology is outlined and the main results are given and described. Finally, the organisation of the thesis is described, and summaries of the chapters are provided.

1.1 Rationale for this research

Organisations' use of consultants in the UK and around the world is growing, with half the world market for consulting being information technology (IT) consulting (Czerniawska and Smith, 2010: 8). Public sector organisations represent a significant market for consultancy services, the UK central government spending a large proportion of its revenue on such services (£540 million in 2009) and a significant proportion of this revenue (66%) on programme or project management and information technology consulting (MCA, 2010). Public sector IT projects are important because many vital services depend on them and their failure can lead to public risk and individual hardship, such as when the Child Support Agency in 2004 failed to provide benefit cheques to parents. Abandoned public sector projects, such as ID cards and National Programme for IT also lead to public scrutiny and media interest even though, IS failures have been studied for years (Sauer, 1999, Lyytinen and Robey, 1999, Lyytinen, 1988, Standish, 1995, Fortune and Peters, 1995). Given the significant sums of public sector money spent on consultants and on IT projects, it is important that public sector organisations procure and manage consultancy and IT services effectively, and there might be a question of public sector accountability for the use and management of consultants.

The problem of effective use of consultants has exercised the minds of academics and public servants. Recent government literature from the National Audit Office (NAO) analysed case studies, provided information on consultants (relative fees and costs for example), and

recommended behaviour for engagement with consultants (Nicols, 2009, NAO, 2006a), from which it may be inferred that previous client-consultancy work beyond procurement had not been understood or explicitly managed. However, such client-consultant relationships have gained little attention from the academic research literature, research that has been published tending to be from the consultant perspective of the relationship (Sturdy et al., 2009), with the consultant seen as the expert outsider and managers as vulnerable, thus leaving room for research that considers the client's role and perspective in the relationship. Research that looks at the client's role might affirm or deny the client's vulnerability and the consultant's expertise, or explain more about what happens in the client-consultant relationship that gives the impression of expertise or vulnerability. Examining the client perspective is important because of the associated activities in inter-organisational relationships, project management, organisational change and the use of professional services (Sturdy et al., 2009: 2).

Some areas of research bear on the effectiveness of consultants (Simon and Kumar, 2001, Appelbaum and Steed, 2005). Areas such as project management (Thiry, 2002, White and Fortune, 2002, Bryde and Robinson, 2005, Aubert et al., 2008, Swan et al., 2008, Papke-Shields et al., 2009), and project key success factors (Cooke-Davies, 2002, Bryde and Robinson, 2005, Fincham, 2002b) have lead to some limited recommendations for clients as to how to engage with consultants (Cobb, 1986, Axelrod, 1990, Poulfelt and Payne, 1994). However, there appears to be a gap in the literature concerning the actual nature of the client consultant relationship, and engagement with each other during IT projects.

An initial research approach that examined the client's accountability for consultancy projects was considered. However, early conversations with senior industry experts established that access would be problematic; public servants might feel threatened, and shy away from explaining their behaviour in any situation where there was possible criticism or implication of failure. Consequently, a decision was made to remove all references to potentially negative or critical terms when approaching gatekeepers, and thus focus on the

positive aspects of behaviours, projects, learning and management. Hence, by investigating effective client-consultant relationships, this research uses some insights from appreciative inquiry (Cooperrider et al., 2003), and though without adopting the particular approach in a restrictive way, became an approach that allowed access to cases of effective engagement and thus to successful projects.

Investigating effective relationships meant that the research aim steered away from IS project failures, and from key success factors, exploring instead effective client-consultant relationships that apparently benefit from engagement, a term frequently used to describe how public sector organisations and their consultants should work together (NAO, 2006b, Fincham et al., 2008, Friend et al., 1998, Czerniawska, 2006b). Despite its frequent use, it is not clear that a widespread and common understanding of the meaning of the term 'engagement' exists or what engagement consists of in practice. Consequently, it is also unclear how engagement can be achieved in a consultancy project, and specifically between participants on an IT project. It is also unclear what implications engagement has for project outcomes and how engagement between participants produces value for the IT project.

The aim of the research is to investigate how public sector clients engage with their consultants and suppliers on IT projects, and to explore how engagement produces value in the context of public sector IT projects. The research questions are:

What behaviours are required for engagement?

Which conditions are important for producing engaged behaviours?

How do conditions and behaviours interact?

What kind of value results from engagement and how is it produced?

1.2 Conceptual framework

An organisation has an advantage if people who participate on a project share norms, and establish social capital through their relationships (Nahapiet and Ghoshal, 1998). Social capital is the "goodwill that is engendered by the fabric of social relations" (Adler and

Kwon, 2002: 17) arising from a stock of networks, norms and trust that people develop together and in organisations (Putnam, 1993). Social capital supports the development of intellectual capital, and Nahapiet and Ghoshal suggest three dimensions that help creating intellectual capital from social capital. However, building social capital takes time and projects are time bounded with participants who come with different functional backgrounds, therefore are unlikely to share pre-existing norms or social capital. An alternative view of the development of productive working relationships is sought in this thesis, based on the notion of engagement. Consequently, from literature on engagement and similar concepts, an alternative framework similar in some respects to social capital was developed, but one that conceptualises the development of relationships in a different way. The framework considers engagement in terms of conditions that afford engaged behaviours to emerge. It is proposed that these conditions and behaviours combine and exchange in a manner that produces project value.

1.3 Overview of research design and methods

This research study explores how participants on public sector IT projects engage with each other, and how such engagement with external service providers produces value. Researching this behaviour requires an in-depth exploration of interactions between participants in public sector IT projects in which IT consultants or suppliers are involved. Hence, qualitative methods were deemed appropriate. A case study approach was used, which provided interviews with several participants on the same project in order to triangulate perspectives. Five case studies were undertaken and these provided interview data, documents and photographic evidence.

The data was theoretically coded (Miles and Huberman, 1994) and analysed against a coding template (Braun and Clarke, 2006, King, 2004) created from the conceptual framework.

1.4 Contribution to knowledge

The major contribution to knowledge of this thesis is the inductively generated conceptual model of engagement developed from the literature and tested with empirical data in order to refine it. Behaviours of engagement were identified and conditions that afforded those behaviours. The behaviours of note were sharing, sense making and adapting. The conditions were environment, participants and expertise. Interactions between behaviours were identified, and the sharing - sense making interaction recognised as a thread that held other behaviours and conditions together. Behaviours and conditions were found to develop together in cycles of engagement, and the different kinds of cycles were identified.
Although this thesis focuses on the public sector client and its consultants, intending to contribute to knowledge in the field of public sector IT projects and its use of consultants, the resulting model of engagement could have wider relevance to engaged relationships in general.

The research complements theory of social capital by identifying how start up relationships can build trust and relational social capital.

The research contributes to studies of client-consultant relationships by showing that differences of perspective and culture between client and consultant constitute an essential component of the relationship.

1.5 Future work

Further research could refine and elaborate the conceptual framework that the research has generated. It might be applied to all consultancy projects, so it would be interesting to test the model further against other non-IT consultancy projects, as well as projects in a range of public sector organisations including non-UK.

1.6 Structure of the thesis

This section provides an overview of the thesis structure and a brief synopsis of each chapter as a guide to the topics covered in the remainder of this thesis. This thesis contains seven chapters including this introduction (chapter1).

Chapter 2 introduces and discusses the project life cycle in the context of public sector IT development. It explores literature that might be relevant to a fuller understanding of engagement. This leads to a conceptual framework on which to build a model for engagement. In the light of that model the research questions can be developed.

Chapter 3 describes the research design, opening with a review of the methodology used and reasons for its use. It sets the framework for the conduct of the research and the need for case study research. The development of the interview schedule is then discussed and the methods used to collect and analyse the data are described. Finally, ethical issues raised by the research are addressed.

In chapters 4, 5 and 6, the data are fully described using quotes, stories and case write-ups to give richness and meaning to the findings, thus allowing the reader to see how they developed. Chapter 4 describes the settings to the five case studies, outlining each IT programme or project and the key parties to it. Interviewees are listed and the project outcome is summarised. Chapter 5 analyses the conditions, the emerging behaviours and the interactions between them for each case study against the model of engagement. It also looks for value from the behaviours in each case. Because this is an in-case analysis of each case study, this is a long chapter with a wealth of detail. Chapter 6 analyses across cases to identify differences and similarities of projects and particularly of emerging behaviours. It draws out how the emerging behaviours can affect the conditions of engagement, thus this chapter focuses on testing and developing a template for engagement that shows the cycles of interaction between conditions and behaviours.

The concluding chapter 7 considers the contribution of the contextualised model in providing a template for examining engagement between participants on IT projects. It presents the findings of the research questions posed in chapter 2, recognises the limitations of the research and explores directions for future research. Finally, this chapter considers the contribution to knowledge that this research provides. It identifies conclusions that may be drawn from the research and makes recommendations about actions that organisations might consider taking to improve engagement between internal clients and their external suppliers or consultants on IT projects in the public sector.

2 Literature review

2.1 Introduction

The overall aim of the research is to investigate how public sector clients engage with consultants and other external professional service providers, specifically on IT projects, and to explore alternative explanations of how engagement produces value on public sector IT projects. This chapter reviews literature relevant to this aim.

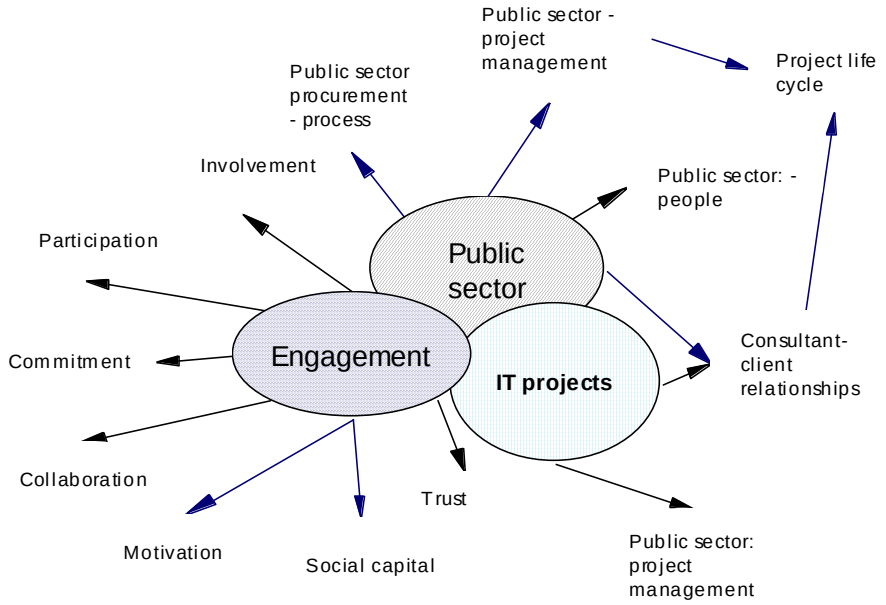


Figure 2-1: areas of literature covered

Figure 2-1 relates to key areas that the review covers, these being three areas of the public sector: its processes, project management and people, together with a review of literature on the client-consultant relationship. An exploration of engagement led to a review of literature that addresses different articulations of engagement: involvement, participation, commitment, collaboration and motivation, and these were initiated from review questions for engagement listed in appendix 8.2 in Table 8-3 on page 290. Social capital theory and trust are considered as alterative theories that might explain development of relationships.

The chapter is organised as follows. First, it discusses the public sector's challenges of managing consultants, specifically on information technology projects, and then it explores the background on public sector procurement, discussing various client types and their relationships with consultants in the context of IT development. Much information technology and consultancy work happens in projects, so a review of some project management literature is relevant. Then, drawing on practice, theoretical, and policy literature, the chapter discusses the concept of engagement and its articulations in related literatures on participation, collaboration and communities of practice. This leads to a suggested initial conceptual model to research how engagement with consultants contributes towards an effective project. Finally, the chapter identifies research questions.

Any piece of literature may relate to one or more types of knowledge: practice, theoretical or research knowledge (Wallace and Wray, 2006: 79-80). Wallace and Wray (2006) identify four types of literature that express these types of knowledge: theoretical literature presents theories, research literature describes systematic enquiries, and practice literature is written by informed professionals. A fourth type of literature is policy literature, which may propose changes in practice. The types of literature may overlap, so that for example, policy literature may be developed with practitioners. This thesis draws on all literatures, including UK government policy literature on public sector procurement.

The approach was similar to the systematic review process aiming to make sense of what existing studies say in order to develop context-sensitive research (Tranfield et al., 2003). Some searches are shown at Table 8-1: sample of initial literature searches. Key word searches relating to engagement were conducted based on words derived from study of consultancy and IT literature, shown in Table 8-2: literature searches for engagement on page 287 in appendix 8.1. The literature found was evaluated against quality, source and relevance, with review questions shown in Table 8-3 of appendix 8.2 at page 287. A thematic analysis of selected literature is listed in Table 8-4 at page 292 in appendix 3 of section 8.3.

This research is concerned with how engagement between public sector client managers and consultants can add value to information technology (IT) projects. The next section will consider some problems in public sector IT projects that use consultants.

2.1.1 What is the problem?

Public sector IT projects often use external consultants, but are also expensive and often fail (Lupson and Partington, 2005, Bronte-Stewart, 2005, House of Commons, 2003-4 , Parliamentary Office of Science & Technology, 2003). Therefore, there is currently much interest in the public sector on gaining value from consultants (Czerniawska and May, Czerniawska, 2002a, Czerniawska, 2006b, NAO, 2006d, OECD, 2001, OGC, 2002a, OGC, 2002c, OGC, 2003a, OGC, 2003b, OGC, 2007b, OGC, 2008a, Roodhooft and Van den Abbeele, 2006, Stumpf and Longman, 2000, Yu et al., 2005).

IT projects are important to the public sector because they are a key means of implementing government policy requiring, often rapid changes to how the public sector department functions and provides services. This puts public projects under greater scrutiny, and hence failure is publicised, (House of Commons, 2003-4 , House of Commons, 2005-06, House of Commons, 2008-09) (Craig, 2005, Craig, 2008, Craig and Brooks, 2006) putting more pressure on projects.

A consultant is someone who trades in knowledge, providing an expert service or expert information (Schein, 1988), with the aim of changing and improving businesses. A manager is someone who is responsible for decisions, actions, changes and implementation, so may be required to account for the decisions, the actions and the consequences; that is the manager has direct control over action (Block, 2000). The manager as the recipient of the consultant's advice is also the client of the consultant. Schaffer (2002) states that consultants are accountable for creating solutions "while clients are accountable for using those solutions" so successful consultancy requires active management of the client-consultant relationship (Clark, 1995). Consultants often are brought in for short periods to offer a specific expertise such as on an IT issue (Perchthold, 2010, Czerniawska, 2002b,

Czerniawska, 2006b, Czerniawska and Smith, 2010). The Comptroller and Auditor General (C&AG) for the UK government's National Audit Office (NAO) found that the commercial experience of consultants can add value to projects by providing skills that would be otherwise difficult to obtain, but that clients still lack commercial skills in the use and management of advisors (C&AG, 2009a).

In the public sector, a common cause of project failure is lack of effective engagement with stakeholders, so consequently the National Audit Office exhorts clients and consultants to engage and implies that engagement will ensure commitment, improve performance and add value to a project (NAO, 2006b: 3). Public servants are advised to engage with consultants and consultants with their clients, but it is not clear how engagement happens or what good quality engagement is. Although, in a contract of engagement, the term 'engagement' may mean only initial seeking and selection, this research concerns the longer-term relationship regardless of contractual arrangements. The NAO exhortation for engagement seems aimed at creating continued shared understanding; engagement must be mutual. The NAO considers from the findings of case studies that senior level client and consultant engagement is crucial for successful delivery of IT enabled change (C&AG, 2006c) because such engagement demonstrates senior management is committed to the change. Organisational commitment refers to a person's attitude and attachment to their organisation (Saks, 2006), and the idea of managerial commitment to a project or initiative has some resemblance. The NAO exhortation implies that engagement precedes commitment, and that engagement has not been happening. The NAO considers from the findings of case studies that senior level engagement especially is crucial for successful delivery of IT enabled change (2006e). Engagement again is in the sense of being involved, because such engagement demonstrates senior management is committed to the change. An NAO report (C&AG, 2006c) of case studies concludes that engagement is required to demonstrate commitment to a project and its supporting paper, (NAO, 2006b), on building client and consultant commitment found "a critical element of consulting projects" to be engagement.

> *"A critical element of consulting projects is therefore engagement - both of the people who work in the organisation that hires the consultants (the client) and among the consultants themselves" (NAO, 2006b: 10).*

However, another NAO report (NAO, 2006f) discusses commitment in the context of collaboration without relating it to engagement, the lack of reference to engagement suggesting confusion or inconsistency of understanding of what engagement means and does for an organisation.

This confusion suggests it is problematic to understand engagement. Indeed, the sense in which engagement is a knowable phenomenon is a moot point because definitions of engagement are described in terms of metaphors. Hence engagement is a paradigm for change (Axelrod, 2001a), "the art of bringing people together" (Block, 2000: 248), "a journey of sensing and learning" (Buckingham, 2005). It is also a two way relationship between employee and employer (Robinson et al., 2004), a management philosophy (Smythe, 2007) and "a process of communication" (McMaster, 1996). Mutual engagement is a dimension of a community of practice that involves processes of community building (Wenger, 1998). In summary, engagement is variously seen in the literature as a paradigm, a journey, a relationship, a philosophy, a process, an art and "a critical element of a consulting project" (NAO, 2006b: 2). This variety of metaphors seems to describe distinct kinds of relationships between consultants and clients, employers and employees and between practitioners in a field of practice.

The writer will return to the problem of conceptualising engagement shortly. Meanwhile, because the problem of interest is in the context of public sector procurement of services, the next section will discuss public sector procurement, first the process in the context of IT procurement development and implementation, and then the approaches to project management and the people involved. This is to provide a firmer grounding for further discussion of the nature of engagement.

2.2 Public sector procurement – the process

The purpose of this section is to elaborate on available public sector procurement guidance. 'Procurement' in this research is understood to mean the acquiring and delivering of IT services from an external professional provider, such as an IT consultant, and possibly implementation if the external provider is also a supplier of IT services.

In the UK, the public sector provides 28% of the market for consultancy (International Financial Services, 2005). Consultants are used for outsourcing, IT, HR, programme management, strategy, operations, financial, business process reengineering and others.

It is helpful to distinguish between different IT services providers, as some are suppliers, some consultants and some contractors. According to Czerniawska and Smith (2010: 16), professional services can be classified as project-based or line management based, and tangible or intangible, thus dividing them into four categories.

This research focuses on project-based professional services and the two main types of service it considers are professional advice that is customised, intangible and project based, and implementation projects that include standardised and tangible projects. Czerniawska and Smith (2010: 16) classify these with a diagram, shown at Figure 2-2.

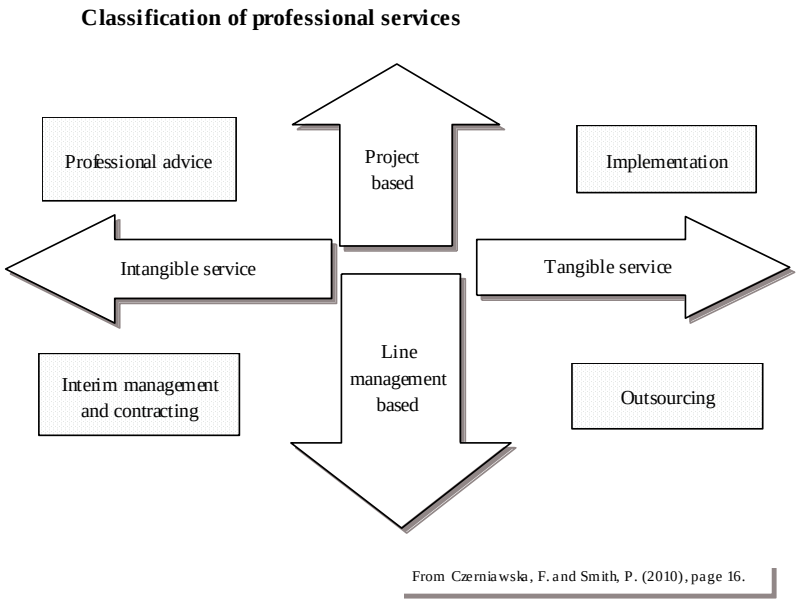


Figure 2-2: classification of professional services (Czerniawska and Smith, 2010)

It is a characteristic of most services that they are intangible (Clark, 1995) because they do not produce something physically tangible. Thus, for example, an IT consultant who advises on how IT could support business strategy is providing an intangible service rather than a tangible good. Nevertheless, the IT consultant might also provide a report on potential strategy, thus creating something tangible to go with the service. Software developers who create a web site are providing a service but they produce an electronic artefact that could be considered tangible. One of Czerniawska and Smith's four categories is outsourcing. "Outsourcing consultancy" means consultants are more involved in delivering a service and are less detached from their clients, (Saint-Martin, 2005) and is especially strong in the field of information technology (IT), however, as a line management based category, rather than project-based, it is of less interest to this researcher. The researcher recognises that there are crossovers among categories when, for instance, someone who acts as a contractor on line management based work may in other circumstances provide a consultancy role. Given these finer points, the focus of the research is on project-based services that use external IT consultancy professionals.

IT consultancy accounts for a large sector of government expenditure on consultancy services (International Financial Services, 2005) so this review in looking at consultancy projects will examine IT projects in particular. There are particular challenges to public sector IT projects. First, IT projects have diverse stakeholders (Lacity and Willcocks, 2000) who come with diverse knowledge, and enter and leave projects at different times (Swan et al., 2008). IT projects require the client to make tacit knowledge of user activities explicit in order that the IT specialist can use that knowledge to complete the project. Tacit knowledge is hard to formalise and communicate (Nonaka, 1994) and eliciting this knowledge for IT requirements is a skilled task. Convincing people from different professions organizations and cultures to work together is difficult (Gray and Larson, 2008: 393).

> *"Insufficient stakeholder involvement in the requirements-elicitation process may cause the requirements to be incomplete" (Stone et al., 2005: 111).*

Gray and Larson (2008) comment that it can be problematic to integrate different project management systems and significant time and energy are needed to establish project communication systems to support effective collaboration. Secondly, the UK public sector is fragmented with a large number of individual organisations with their own IT systems and processes leaving room for improvements in efficiency (HM Treasury, 2009: 3). Thirdly, there is the potential for a clash of cultures between the public sector client and the private sector consultant or supplier, and whilst such clashes might occur in private-private ventures, clashes seem more likely when parties come from public and private sectors. Yet, the public sector has to bring in private companies to provide the technical skills that it does not have.

Government literature advises value for money (VfM) calculations throughout project procurement, with consequent management accountability for delivery of the business requirement (OGC, 2002c). However, consultancy effectiveness has been queried (Clark, 1995, Clark and Fincham, 2002, Kieser, 2002) and expenditure in the public sector criticised (House of Commons, 2007). In response, the UK government took action that addressed issues of poor procurement. Firstly, the Office of Government Commerce (OGC) researched and reported on common causes for project failure (OGC, 2002a), value and risk (OGC, 2002c, OGC, 2007b), and produced a supplier code of best practice (OGC, 2003a) and advice on value for money (OGC, 2002c). Government literature has also assessed procurement (OGC, 2007d, OGC, 2007c) and reviewed progress (NAO, 2010b). Government also advises on procurement frameworks (OGC, 2006).

Despite this action on policy, Gershon's independent report to government criticised the management of procurement:

> *"There is little evidence that the procurement of professional services (for example consultancy, legal services, financial advisory services) is managed to ensure value for money" (Gershon, 2004: 26).*

He based this criticism of management on consultation through meetings and workshops with a range of individuals and representatives of public and private sector organisations and

through a written consultation exercise. Noting that information and communication technology (ICT) helped savings, Gershon suggested accelerating use of technology to enhance productivity. He also recommended a framework for analysis and deliverability of potential efficiency savings and enhancement of strategic management leadership and professional skills.

The Comptroller and Auditor General (C&AG) of the National Audit Office (NAO) produced reports on improving IT procurement (C&AG, 2004), sustainable procurement (NAO, 2005), government use of consultants (C&AG, 2006a), successful IT-enabled business change (C&AG, 2006b, C&AG, 2006c) and project outcomes (C&AG, 2006d). In the same vein, a government report found that central government organisations did not always accord contract management the priority it deserved (C&AG, 2008). This led to a report with recommendations on achieving value for money through effective contract management (House of Commons, 2008-09) and the IT work strand of the operational efficiency programme built on the IT efficiencies achieved as part of the Gershon programme. This work strand focused on improving the delivery of IT enabled change programmes (HM Treasury, 2009: 12).

The OGC anticipates that "project requirements and outcomes may well change over time" advising good governance and change management throughout a project (OGC, 2002c). A defined process for UK central government IT procurement, is the Gateway review (OGC, 2007a), which is peer review with a number of steps at key decision points from initial planning to going-live that a department must go through for procurement. Gateway reviews concentrate on the project life cycle and occur at specific stages from review 0 to review 5. The first Gateway stages concentrate on requirements and selection of contractor. Three reviews happen before contract award and two look at service implementation and confirmation of the operational benefits. The process emphasises early review for maximum benefit (OGC, 2008b). Review 5 assesses whether expected benefits are being delivered, and

what is being done to pursue continued improvements. It asks what contingency plans there are for future changes (C&AG, 2004: 24).

2.3 Public sector – project management

Projects are an interesting focus because much consultancy work is project based, when participants from different backgrounds must bring diverse knowledge and skills to transitory and finite activities. The research interest is focused on external participants who provide professional services, whether they are called consultants or suppliers, the term 'professional' implying use of specialist knowledge, and work that is based around projects (Czerniawska and Smith, 2010:13). The interest is in suppliers of IT systems as well as consultants because while an IT system is being developed, the suppliers may act as consultants to the commissioning clients.

For good practice, IT management in government departments uses a well-recognised project management methodology called PRINCE2 (PRojects IN Controlled Environments version 2) (OGC, 2008c). An information technology methodology is a set of processes and methods for specifying and developing IT systems. Critical research literature indicates that general project methodologies have a transitional role providing procedural knowledge to execute a complex task. They embody what and how things should be done, so represent authority (Wastell, 1999). Such methodologies provide shared artefacts for communication such as project plans and logs (Bechky, 2003). Sharing project plans and logs, may help coordinate the practices of different social worlds (Star and Griesemer, 1989) such as those of the customer, the user and the developers by allowing knowledge boundaries to be crossed and influencing productive dialogue (Tsoukas, 2009, Sturdy et al., 2006).

In summary, having a methodology is a means to control a project. In a public sector context, choosing a methodology provides some governance, transparency and accountability and the PRINCE2 methodology emphasises governance and organisation through setting up a management structure that stresses planning with controls of quality,

progress and exceptions. One of the characteristics of a PRINCE2 project is that it has a finite and defined life cycle (OGC, 2008c).

In general, the concept of a project life cycle is a useful way of managing projects. Life-cycle models show phases or stages of the project and their order of execution, but specific models vary depending on industry, type of project and preferences. This research will use a basic model of software development that has a defining stage, a planning or design stage, implementation or executing, testing and delivering, and maintenance. The last phase, maintenance, may be excluded from a PRINCE2 project because maintenance is ongoing, not part of a finite life cycle. The main phases of software development are requirements specification, developing models and broad design, detailed design and implementation, testing and delivering, maintenance.

Project life cycle phases do not have to occur in a linear fashion and may overlap. For example, implementation, testing and delivering may overlap and iterate, because implementation includes any computer programs that have to be written as well as purchase and installation of hardware and software systems and such hardware and software may well need to be tested as it is implemented (Avison and Fitzgerald, 2003: 34). Implementation also includes training and documentation, which can take place concurrently with testing. However, in government projects, there is a stress on completion of one project phase and passing over the deliverables before the next phase may start, known as the waterfall model (Royce, 1970) shown at Figure 2-3. This is a government requirement (C&AG, 2004), but a disadvantage is that the waterfall model is not the flexible, iterative model (Schach, 2004) that big projects need.

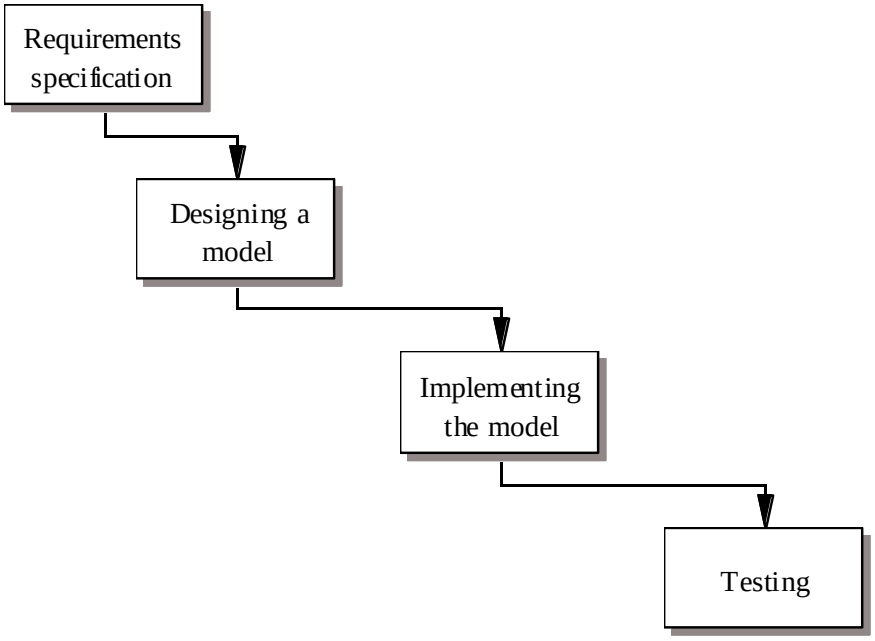


Figure 2-3: waterfall model of project life cycle

Methodologies and processes like the Gateway process are expected to improve the governance and management of IT systems development by setting out clear structures and orderly completion of tasks to ensure successful completion of projects. However, in practice, despite the methodologies, even completed projects often go over budget and time.

In summary, government reports from the NAO and the OGC have criticised the procurement process for consultancy and IT projects, and advised on IT governance and methodologies. The concept of IT lifecycles is intrinsic to such methodologies and the governance of IT projects. Therefore, this thesis will research the nature of engagement in the context of project methodologies and life cycle stages.

All projects have participants, so the next section will review literature about clients who are responsible for procurement and project management, and participate in projects.

2.4 Public sector procurement – the people

This section explores client complexity. Its aim is to explore how client engagement is complicated by what turns out to be a multi-headed client, and to show the consequent implications for research related to engagement. First, it will discuss how the academic

theoretical and research literature categorises clients and public sector clients in particular. Secondly, it will examine which clients are involved in each stage of the project life cycle. Thirdly, it will discuss client-consultant relationships. That discussion will lead into a review of literature relevant to engagement.

The NAO does not distinguish types of client in public organisations (NAO, 2006b). However, within a single organisation, there are likely to be a number of different individuals who are involved in the consultancy project and these can be modelled in different ways. Three possible models of clients are from the consultancy perspective (Schein, 1997), what level of accountability a client has (Bovens, 2007), and as stakeholders in IT development (Lacity and Willcocks, 2000).

Schein (1997) proposes a model that distinguishes between different individuals involved in the roles of consultancy clients. He categorises and identifies the following types of client, all of which may exist within a single consultancy project: contact, intermediate, primary, unwitting, indirect and ultimate clients. Contact clients are individuals who first contact the consultant. Intermediate clients are individuals or groups who get involved through meetings and other activities. Primary clients are those who own and manage the problem and may pay the bill. Ultimate clients are those whose welfare other clients and the consultant must consider. Unwitting clients are those related to the primary client but are unaware that they will be impacted. Indirect clients are those who are aware that they will be affected by consultancy interventions but either the consultancy or other clients do not know about them. Schein's client types are summarised in Table 2-1. Schein's model is static, pluralistic (so for example, in the public sector it would include the end user of an IT system) and does not acknowledge levels of power. The criticism is that Schein's model does not include ignored or proscribed clients (Alvesson et al., 2009). Nevertheless, it seems a useful model from which to develop.

Table 2-1: Schein's basic client roles

Role	Comment
Contact	"the individual(s) who first c*ontact* the consultant with a request, question or issue"
Intermediate	"The individuals or groups who or which *get involved* in various interviews, meetings, and other activities as the project evolves."
Primary	"The individual(s) who ultimately "own" the problem or issue being worked on; they are typically also the ones who *pay* the consulting bills or whose budget covers the consultation project."
Unwitting	"Members of the organization or client system above, below and laterally related to the primary clients *who will be affected by interventions but who are not aware that they will be impacted*."
Indirect	"Members of the organization who are aware that they will be affected by the interventions but who are *unknown to the consultant* and who may feel either positive or negative about these effects"
Ultimate	"The community, the total organization, an occupational group, or any other group that the consultant cares about and *whose welfare must be considered* in any intervention that the consultant makes."

Schein also has a second model that classifies clients according to levels of problems, which can be individual, interpersonal, group (face-to-face or intergroup), organisational, inter-organisational or larger system level, summarised in Table 2-2. Individual level comprises the "intra-psychic" issues, which might involve bonding with others. Relevant consultancy interventions for them would be coaching, mentoring and training. Interpersonal level pertains to the relationship between individual and other members of a client system. The consultant would aid the relationship. Face-to-face group level implies that the issues are about how a team functions as a group, and may be part of the work of a consultant project manager. The consultant's role might be to facilitate meetings, manage agendas or structure the work of the group. Inter-group level focuses on problems that derive from how organisational units relate to each other and co-ordinate their work for the organisation. The consultant intervenes at system level. Organisational level pertains to problems that concern mission and strategy of the client system. Inter-organisational level deals with interventions that influence systems where members are themselves complete organisation units but working with each other. The larger system level pertains to issues involving society. Thus, Schein points out the complexity of client identification.

Table 2-2: Schein's types of client by levels of problem

Level	Comment
Individual level	"comprising the "intra-psychic" issues that a given person has for which the relevant intervention is some form of individual counselling but which also involves what Rashford and Coghlan (1994) identify as the fundamental problem of bonding with others, of membership in an organization or community." (Rashford and Coghlan, 1994)
Inter-personal level	"Contains problems or issues that pertain to the relationship between the individual and other members of the organization or client system."
Face-to-face group level	"Shifts to problems or issues that are lodged in how a group or team functions *as a group*. "Face-to-face" implies that the group is conscious of itself as a group"
Inter-group level	"Focuses on problems or issues that derive from the way in which groups, teams, departments and other kinds of organizational units relate to each other and co-ordinate their work on behalf of the organization or larger client system."
Organization level	"Pertains to problems or issues that concern the mission, strategy and total welfare of the whole client system"
Inter-organizational level	"Deals with important interventions that influence organizational sets, consortia, industry groups and other systems where the members of the system are themselves complete organizational units but are working in some kind of alliance or joint venture with each other"
Larger system level	"would pertain to problems or issues that involve the wider community or society where the consultant may be working with social networks, with organizational sets, or with community groups that involve a wide variety of issues"

Bovens in the context of accountability identifies potential multiple actors at similar levels to Schein's problem levels: corporate, hierarchical, collective or individual (Bovens, 2007). In the case of the public sector, corporate would mean public bodies with independent legal status; hierarchical actors would be those at the top of such organisations, such as the minister of a government department. Collective actors would be the multiple individual officials that work together in an organisation, whilst individual actors would be the individual officials. Bovens actors are in contexts where they have to explain and justify their actions to stakeholders, in order to help identify, who in a political context, has contributed to a policy. Bovens' model may also be applied to public sector projects because clients that manage are the clients that have responsibility for projects, thus in Bovens' terms need to justify their actions.

Figure 2-4 seeks to match Schein's second model of client problems with Bovens' actors. There is some matching but also some overlap. Schein sees the client as the recipient of consultants' services, whereas Bovens sees the client as a decision maker. They have

different constructions, and different perspectives on what a client is and does, so the diagram, by combining the two models, indicates more complexity to the client identity.

Rather than clients, Lacity and Willcocks (2000) categorise stakeholders in the specific context of IT development as customer IT staff, customer IT users, supplier senior managers, supplier account managers, supplier IT staff, subcontractors, though not including consultants. They found at least four types of relationship with stakeholders: tentative with unknown goals, collaborative with shared goals, cooperative with complementary goals and adversarial with conflicting goals. They noted that the relationships were dynamic, changing depending on the task, so stakeholders could occasionally fight but still overall have effective relationships (Lacity and Willcocks, 2000: 365-367).

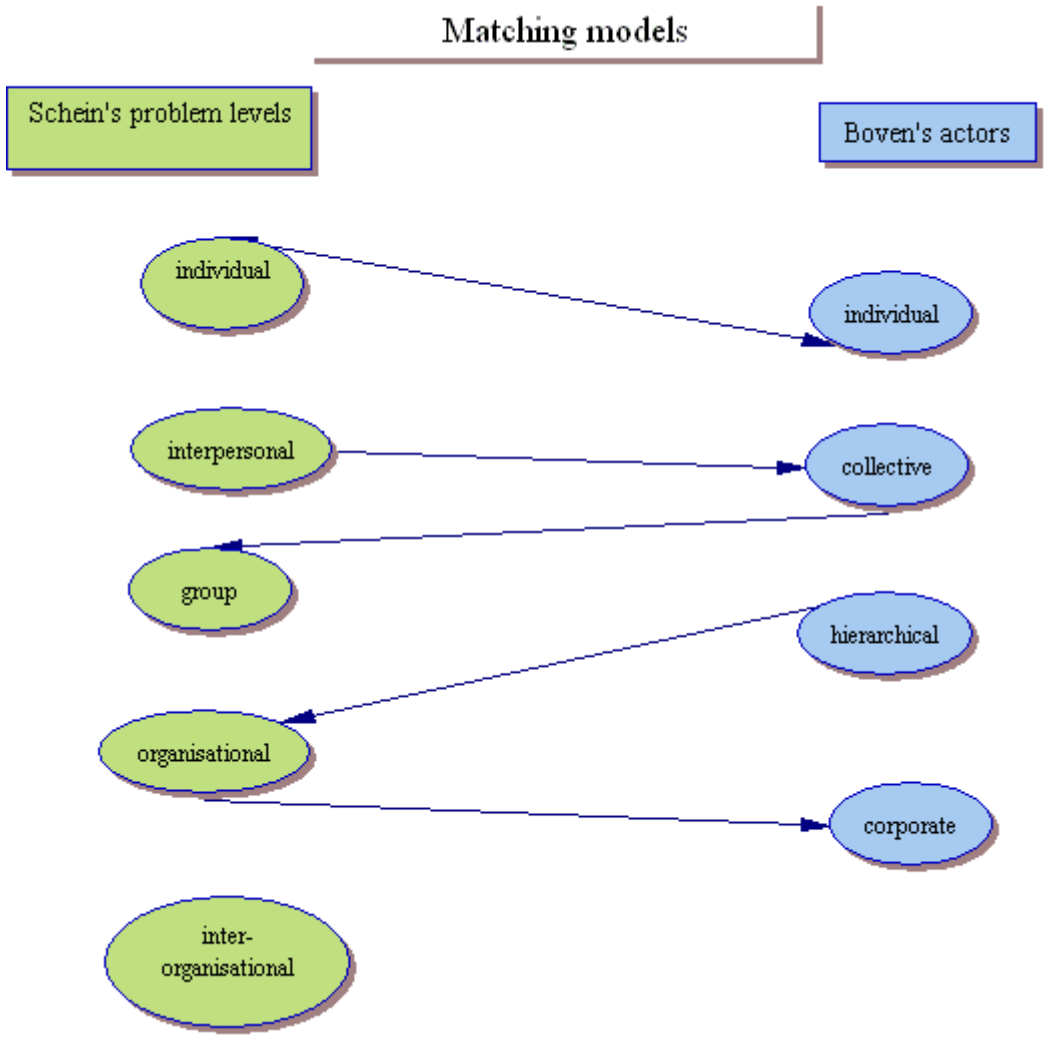


Figure 2-4: matching models

The difficulty in categorising clients and the complex interrelationships between them makes it difficult to evaluate consultancy contracts (Rehfuss, 1979: 213), which implies that it is also difficult to identify which clients engage with consultants under what circumstances and how. Clients could be individuals, or organisations that act as bodies. Hence, for example, a project steering board, responsible for governance, although consisting of individuals, is responsible as a body and makes decisions as a body, so represented by Bovens' collective actors and at Schein's level of groups. Alternatively, clients could be stakeholders because they may have stakes in the project, represent different organisations, and be identified as clients at different levels in Schein's terms, but justify their decisions as different actors in Bovens terms.

Government literature gives some idea of who the public sector client might be although it does not distinguish between types in the way that Schein and Bovens distinguish. Two types might be considered: public officials and politicians. Public officials work in the Civil Service and other public organisations such as county councils and the NHS. The Civil Service (and perhaps other public organisations) is a hierarchical bureaucracy with a limited degree of initiative and discretion permitted to lower grades (Brown, 2007a). Brown (2007b), examining UK government accountability with respect to value for money, argues that there is an accountability gap that prevents criticism of government policy, and consequently neither the National Audit Office or the Public Accounts Committee can consider policy causing bad value for money. Responsibility only for implementation rests at the top of the hierarchy. In UK government departments (but not mandated in other public organisations), IT projects must be owned by a nominated senior manager (Intellect, 2000) or a senior responsible owner (SRO) (C&AG, 2006b). Ownership is necessary because otherwise government projects are organised so that

> *"responsibility, authority, and accountability are often split between different individuals or groups, making it difficult for a business programme to benefit from a single point of strong leadership" (Intellect, 2000: 14).*

Development of IT systems requires a responsible senior manager (often referred to as the senior responsible officer or SRO) to participate in some way. UK central government mandates appointment of an SRO, who is responsible for ensuring that a project or programme meets its objects and realises benefits. The SRO is a formal participant, accountable within a governance structure. At operational level, IT users may participate in the testing because they have to, but senior managers, including SROs may stand back, make no strategic decisions and not participate (C&AG, 2009b). The SRO may be the primary client in Schein's model, which in Bovens' model, makes the SRO an individual actor.

Politicians have responsibility for policy whether at government or local level. At government level, the politicians are ministers. Gateway reviews name the minister responsible for a project so this minister also may be the primary client. The SRO may be the contact or intermediate client or perhaps more than one person forms the primary client. In Bovens' model, the minister may be an individual actor and a hierarchical actor. The minister also represents the government so is the public equivalent of a corporate actor. Alternatively, perhaps the department should be seen as the corporate actor. The project board is a collective actor. The political actors and the public servants may be one group of decision makers or may be two groups with some sort of relationship in order to make decisions. This is where the Bovens typology is useful because it recognises the difference between individual and collective actors, as well as helping recognise actors in structures of governance.

In summary, the client is a complex entity, sometimes many-headed, separate entities, which might make relationships with consultants more complex, and make it more difficult to explore which client interacts with consultants, and thus more difficult to find who engages with and manages consultants. Other external suppliers increase the complexity of relationships in the public sector organisation, as not infrequently, particularly in IT, consultants and contractors work on the same project. The relationship with consultants is the topic of the next section.

2.4.1 Client-consultant relationships during the project life cycle

This section will look at literature that identifies key issues concerning client-consultant relationships at different stages of the project lifecycle, so it is structured around the stages of the life cycle. It is assumed that consultant and client engaging with each other will contribute to the increased effectiveness of the project. However, value from engagement will be explicitly considered later in this chapter.

The requirements phase is an analysis phase where business, system and software requirements are gathered and stakeholders identified and met with to determine requirements (Robertson and Robertson, 1999). Types of client involved at this stage might be primary and unwitting clients and ideally ultimate clients. Intermediate clients, also involved, would include developers, analysts, designers and professionals from the supplier or consultancy firm, together with the representatives who know the public sector business requirements and priorities. The word 'supplier' may include consultants and contractors.

The requirements phase involves selection of supplier. At selection, clients are the contact client, and a primary client who pays the bill. An independent consultant might be present at this stage to give an opinion on the choice of supplier, and shortlisted suppliers may advise on the terms of reference of the project. After selection of supplier, different clients may be active. If the level of problem is at organisational or even at larger system level at this stage, the actors might be corporate representatives of the department or government. In PRINCE2 at this stage, a project board is set up and ought to include a senior user representative and the board appoints a project manager, as shown in Figure 2-5.

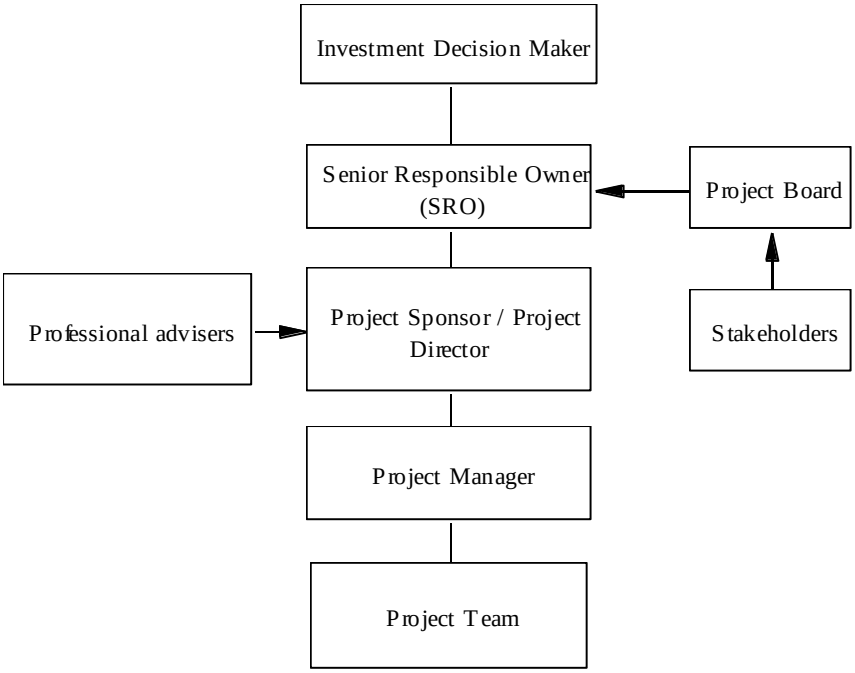


Figure 2-5: project organisation (OGC, 2008d)

Requirements' gathering produces lists of functions and behavioural requirements that are provided to the possible suppliers, contractors, consultants or vendors. If requirements are ambiguous, then there is still a problem to reach subsequent stages. Ambiguity may come from poor identification of the business case (OGC, 2001).

The client needs organisational knowledge and knowledge of the business case for how the project will provide the organisation with value (OGC, 2002c). At the start of the project life cycle, a lack of clear knowledge on the part of primary and contact client (such as ministers, the SRO and senior civil servants) about the business or policy direction, together with ambiguity about priorities, may lead to a lack of clarity about the scope of consulting engagements, required products and success criteria. UK government reports indicate that SROs have lacked this commercial awareness (C&AG, 2009a, Nicols, 2009) and projects have lacked clear senior management (C&AG, 2009b, C&AG, 2006b). These omissions may lead to consequent failure to manage consultants effectively and hence failure to achieve value from the project.

A project manager coordinates the direct team members as well as working with outsiders such as vendors, or suppliers and is the direct link with clients. For the OGC, a project manager needs to lead, manage and co-ordinate the project team on a day-to-day basis (OGC, 2009), whereas critical literature says that a project manager needs only rudimentary technical knowledge but needs orchestrating skills to induce people to address the right issues and make the right decisions (Gray and Larson, 2008). The OGC requires project managers to have the skill to "build and sustain effective communications with other roles involved in the project as required" (OGC, 2008d). Sauer, Gemino and Reich, studying the factors of project risk, found that those run by experienced managers were more likely to be successful in terms of quality, budget and time but a change of project manager had seriously deleterious effects, and top management had a significant role to play in the management of project risk (Sauer et al., 2007).

After a contract is signed, requirements may still be being agreed, especially if ambiguity still exists (Schach, 2004). Ambiguity may arise through lack of business clarity on the part of the client, but unscrupulous consultants may accept an ambiguous contract from an inexperienced client (Craig and Brooks, 2006, Craig, 2008). Refining the requirements at this stage can lead to scope creep and renegotiation of the contract as in the Libra case described by Fortune & Peters (2005), with consequent reduced value for money (Brown, 2007a). There is evidence that supplier selection has recently improved (C&AG, 2006b, C&AG, 2006c), but this leaves a question of how the client manages such a situation after the contract is agreed. Developing an information technology system needs the clients to explain the information that the technology must contain and process, to the suppliers who will develop it, even though users cannot always explain what they want (Stone et al., 2005: 51).

The design stage is where the software system design is produced from the requirement results. Designers may be employed by the external consultancy or members of the supplier team, or internally. They produce the details of how the system will work. Shared

understanding of the business requirements from the users helps the output of this stage. As design proceeds, users may however realise that more is required of the system. If project scope creeps, the financial value of the contract to the supplier may decrease or need to be renegotiated. Types of client that might be involved at this stage are primary, intermediate and ultimate clients or their representatives. Primary clients are senior management who own and manage the problem - the SRO in the NAO documentation. Senior management need not have the technical skills to design, so management participation may not be possible, but must not be disregarded. Involvement, engagement or commitment at most stages still seems necessary for success (Biehl, 2007, Hales, 1993). Hales (1993) reports on the design phase of an IT project that went well, but management did not respond, and the project stuck at the end of the design phase (Hales, 1993). Intermediate clients as individuals or groups get involved through meetings and other activities. Ultimate clients are considered at the design stage. Ultimate clients are the end users who will be affected by the software system and whose welfare is to be considered. In the public sector, they are the public for whom the system is being designed. For example, a library system might identify ultimate clients to be children or older people. The design must consider this ultimate client for it to be worth doing (Biehl, 2007 p56), as without this, the project would have no public value, although it could be of value to the public servants if it saves time and effort.

In IT projects, design methods can show the potential architecture of a system to a user. For example, an interface can be demonstrated without the full functionality. At this phase, there is room to agree, correct or refine the requirements. These techniques require the designer, perhaps an IT consultant, to communicate design progress to the clients. IT literature indicates user participation is necessary for success but not which users nor if one stage requires more or particular participation (Biehl, 2007, Gallivan and Keil, 2003, Robey and Farrow, 1982) and apparently few previous scholars have separated user participation into stages. However, it would be expected that groups of ultimate users (who might be the public) and intermediate users (operators of the system) would be needed to check first that

the design provides benefits to the public, and secondly that employees can operate the software. Top management as contact or intermediate client is needed to check for deviation from plan, budget, schedule or user requirements. The project manager might perform some of this role. Principles for consultants to follow at this stage include treating interactions as learning events, asking what the client is contributing to addressing the problem, seeking language that gives clarity without judgment (Block, 2000: 264).

At the implementation stage of an IT project, code is produced from the deliverables of the design stage. Technical knowledge and skills are required. Previous researchers do not say what kind of user should be involved or participate; just that user participation is required. Yet the implementation phase of an IT project requires technical skills that the end user may not expect to have. Again, intermediate clients as individuals or groups get involved through meetings and other activities. They may be different client groups from those at the design stage.

Considering a wider range of projects than IT projects, Block says that it is at implementation stage that consultants prove the worth of their service if they get clients involved.

> *"The greatest service of the consultant may be to raise consciousness of the client about the value of engagement in the implementation process" (Block, 2000: 265).*

Engagement principles that apply to implementing new organisational practices include balancing participation and presentation, allowing choice, changing conversations, being transparent, expressing any doubt publicly, and creating structures to fit purpose (Block, 2000: 264). Although Block does not categorise clients in Schein's terms, nevertheless, there is no evidence why the suggestion of raising consciousness for consultancy projects in general should not also apply to IT projects.

In the testing phase, implementation is tested against the requirements. It involves unit, volume and whole system testing. At this stage, IT research literature advises users should include the ultimate clients, or their representatives (Biehl, 2007, Gallivan and Keil, 2003,

Robey and Farrow, 1982, Wang et al., 2005). The intermediate clients as individuals or groups get involved through meetings and other activities and may be different client groups from those at the design and implementation stages. Senior management being primary clients who own and manage the problem and may pay the bill must participate because they sign off acceptance tests and accept the system meets the requirements that were agreed and output at the requirement phase.

> *"test it until you get it right and only then once you have got it right go ahead with it" (Bacon, 2003: Q170)*

Pressure to produce on time may lead to wrong decisions, such as shortening time for testing, which may have disastrous consequences (House of Commons, 2003-4).

Finally, in producing outcomes, any one project has influences outside itself that may reduce the final effectiveness of the outcomes of the project, such as the methodology a public sector project is expected to follow, the nature of the consultancy, and whether the project is within a programme of projects. For example, a change of government policy may lead to a change of project direction or even termination of a programme, such as the recent axing of identity cards (The Independent, 2010, Home Office, 2010).

2.4.2 Views of client-consultant relationships

Views of client-consultant relationships are complex and many, and Mohe and Seidl (2011) analyse several different perspectives. Theoretical perspectives that they analysed and that are relevant to this research include role theory such as Schein's conceptualisation of client roles (Schein, 1988), situated learning theory (Handley et al., 2007) and the theory of 'otherness' (Kipping and Armbrüster, 2002, Clegg et al., 2004). Situated learning theory theorises that management consultants learn the practices and identities appropriate to their clients/ projects, and this learning is important for the transfer of knowledge. Such behaviour requires involvement and participation, which concepts will shortly be discussed. The theory of otherness relates to the assertion that a difference between client and consultant forms an essential component of the relationship (Kipping and Armbrüster, 2002)

and to bridge that difference would be counter-productive. However, Mohe and Seidl state that the theoretical basis for this perspective has not been sufficiently developed because it does not depend on a comprehensive sociological theory (Mohe and Seidl, 2011).

The above discussion of the literature on project people and process indicates that client entities and relationships are complex. Much academic literature has tended to focus on the consultant perspective of the relationship, and less is known about consultancy projects with clients (Sturdy et al., 2009), so this section will assess some theoretical and research literature that focuses on the client-consultant relationship.

Fullerton and West (1996) found clients and consultants had different perceptions of the relationship, clients tending to focus on contract details while consultants were concerned to build up relationships. That this behaviour still occurs in UK central government is borne out by NAO policy literature that indicates effort is put into initial procurement but not into continued management of the relationship for the duration of the project with the consequence that UK government suppliers are not held to account during a project (C&AG, 2010).

According to Hislop (2002), clients can shape their consultancy relationships during implementation of technological innovations. Hislop researched four case studies of IT implementations, though none in the public sector. Hislop based his study of the diversity of client behaviours on Granovetter's embeddedness concept (Granovetter, 1985) finding the client behaviours "related to the different social networks and organisational cultures", and thus he, Hislop, asserts that focusing on the role of consultants in a client-consultant relationship provides only a limited explanation of the character of the relationships. In similar vein, clients and consultants "belong to different interpretive communities and have difficulties to understand each other, and share knowledge" (Devinney and Nikolova, 2004: 1). Alvesson et al (2009) recognise that the client is more fluid and complex than a single, static and distinct entity, finding that consultants construct client identities and that client' identities vary with the duration of a project. They conclude that it is important to study

consultants, and to understand how they are constructed by clients. That is, clients should be seen more as active participants. Alvesson et al recommend researching

> *"the variety of consultant and client positions and constructs to investigate how these are produced interactively over the duration of projects." (Alvesson et al., 2009: 262)*

It seems that these more recent writers, Fullerton, Hislop, Devinney and Alvesson are all suggesting that client and consultants construct understandings of each other, but that client and consultant constructs differ and may clash, so they have different views of effective relationships, in which case, surely engaged relationships also will engender different views.

Engagement, involvement or commitment of top-level management and positive interactions between consultants and clients is recommended in academic and practitioner literature (Axelrod, 2001b, Axelrod et al., 2006, Barki and Hartwick, 1994a, Biehl, 2007, Block, 2000, Czerniawska, 2006b, Handley et al., 2006a, LCE, 2006, NAO, 2006b, C&AG, 2006a, C&AG, 2006b). However, it is not clear what engagement in general means, so it is worth exploring the term in government, practitioner and academic literature before discussing client-consultant engagement. The next section will explore these literatures.

2.5 Review of engagement literature

This next section reviews the literature on the phenomenon of engagement and explores themes. It focuses on conceptualisations of engagement to explore its various articulations.

Previous research on engagement seems to have focused on outcomes and products, being mainly surveys or quasi-experimental (Gable, 1996, Saks, 2006, Schaufeli et al., 2006). Such research seems to be one-sided, focusing on for example, employee engagement with work (Saks, 2006, Schaufeli et al., 2006), student engagement with learning (Handley et al., 2007, Robinson and Hullinger, 2008, Arbaugh, 2000), client engagement with child welfare services (Yatchmenoff, 2005) customer engagement with a brand (Mollen, 2010). These approaches apparently use engagement as a one-way relationship, rather than transfer and sharing of knowledge through communicating with other people.

Saks (2006), measuring antecedents and outcomes, attempted to explain employee engagement through social exchange theory, which holds that "a relationship evolves over time into trust, loyal and mutual commitments" (Saks, 2006: 603), and can be found through enriched and challenging jobs with positive consequences for organisations, but the relationship is with an organisation rather than with people. Saks does not explain differences between job engagement and employee engagement, but does suggest that employees who perceive higher organisational support are more likely to engage both in the job and with the organisation. For employees to engage, managers need to provide employees with social support. Moreover, Saks does not identify trust or commitment as aspects, antecedents or outcomes of engagement and, although social exchange is important for employee engagement, he concludes:

> ***"we cannot be sure that the antecedents cause engagement or that engagement causes the consequences" (Saks, 2006: 615).***

Engagement is valued in practitioner as well as in policy literature. Consultancy practitioner literature is usually addressed to consultants, advising consultants to engage with clients, and how to engage (Axelrod, 2001b, Axelrod, 2001a, Axelrod, 2005, Axelrod, 2007, Axelrod et al., 2004, Axelrod et al., 2006, Biggs, Block, 2000, Block, 2001, NAO, 2006b , Czerniawska, 2002b, Toppin and Czerniawska, 2005). Axelrod suggested four underlying principles that would produce an engaged organisation: widening the circle of involvement through people and ideas, connecting people to each other, creating communities for action and embracing democratic principles.

Czerniawska (2006b) addresses the intelligent client with advice on how to make the best use of consultancy. She implies two meanings to the term engagement: the contractual engagement and the relationship. She says little on the value of engagement as a relationship, but recognises that engagement is a relationship that determines the success of consulting projects. Bower and Degler (1999) also recognise the two meanings, and discussing the value of engagement from the client's perspective, advise to search widely in order to identify a possible consultant to engage for a project. Their emphasis is on setting

up the initial relationship and the contractual engagement, but they also discuss softer issues such as interest, professionalism, building confidence, evidence of relevant prior experience, expectations, sense of all perspectives, physical presence. They note,

> *"Successful engagements seem to be marked by an early, shared understanding of expected results." (Bowers and Degler, 1999: 25)*

The NAO exhortation for engagement also seems to be aiming at this continued shared understanding because it recommends actions that clients and consultants can take together to improve engagement. Clients should clarify the aims of a project, prepare the ground for the use of consultants and maximise the value employees can add. Clients should also involve consulting firms prior to the procurement phase of a project, exchange information with key suppliers and incentivise the consulting firm. Consultants should actively involve client staff, and ensure that the attitude of consultants towards clients is appreciative and sensitive towards the organisational ethos. Therefore, engagement in the sense of relationship building must be mutual.

Writers on these relationships seem to conflate engagement with other phenomena like involvement, participation, commitment, collaboration or even motivation. The next sections explore them with the intention of clarifying some concepts of engagement.

2.5.1 Involvement

First, how does engagement differ from involvement? In the 1970s, user involvement was assumed to be a good thing, although Ives & Olson's 1984 review of the research found that only seven out of twenty-two studies showed a positive relationship between user involvement and project success (Ives and Olson, 1984). Involvement often refers to user participation in systems development processes. Barki and Hartwick defined user involvement as a psychological state when the user considers a system to be both important and personally relevant (Barki and Hartwick, 1989: 53). Barki et al distinguished involvement from participation by suggesting involvement is a separate construct that refers to a psychological state although they do not elaborate on what that state might be.

Hartwick et al (1994) later define involvement as an intervening variable between user participation and system use; their evidence for this suggestion was a model that they tested on a number of information systems projects. For Saks, job involvement relates to self-image, and to how employees perform their jobs (Saks, 2006: 602). When developing IT systems, managers can be "a priori involved" or "inquiry involved" (Swanson, 1974: 179) depending on whether they make queries about using a system or whether they initiate changes. Axelrod, (2004) in the context of engagement for consultants, writes that involvement is "working with others to get things done" thus implying that involvement and engagement may be similar phenomena (Axelrod et al., 2004: iv). In conclusion, in the sense that involvement is working with other people, it is highly relevant to engagement.

2.5.2 Participation

Participation is the next concept to compare with engagement, because user participation in IT projects has been much studied (Barki and Hartwick, 1989, Doll and Torkzadeh, 1989, Hales, 1993, Barki and Hartwick, 1994b, Barki and Hartwick, 1994a, Hartwick and Barki, 1994, McKeen et al., 1994, Freeman and Littlewood, 1996, Hunton and Price, 1997, McKeen and Guimaraes, 1997, Butler and Fitzgerald, 2001, Smythe, 2007, Aubert et al., 2008).

Barki & Hartwick (1989) have defined and examined user participation and user involvement (Barki and Hartwick, 1994a, Hartwick and Barki, 1994). Barki and Hartwick proposed three dimensions to IS project management: formal planning, internal integration and user participation. Formal planning relies on plans, budgets and schedules. Internal integration concerns practices that increase the cohesiveness of the project team. User participation ensures external integration. Barki and Hartwick (1989) defined participation as "a set of behaviors or activities performed by users in the system development process" (Barki and Hartwick, 1989: 53). Later they also identified dimensions of participation as responsibility, hands-on activities and user–IS relationships (Barki and Hartwick, 1994a: 74). Responsibility refers to "user activities and assignments reflecting overall leadership or

accountability for the system development project" (Barki and Hartwick, 1994a: 423). They found that responsibility was the dimension that had the bigger influence on user involvement and user involvement is more important than user participation in explaining system use. Voluntary users developed more positive attitudes than did those who had to use the system. They suggested that participation leads to involvement (Hartwick and Barki, 1994). The antecedents of user involvement need to be investigated but they seem to have little effect on levels of participation.

This research on participation does not appear to relate engagement to participation. However, Kappelman and McLean when clarifying various terms with regard to users of information systems, included engagement:

> ***"User engagement is proposed as a general term of the total set of user relationships towards IS and their development, implementation and use."(Kappelman and McLean, 1994: 514)***

A difficulty with this definition is that it refers to users and not to managers of users. Kappelman and McLean define users as those whose work is influenced by the IS system. They offer a taxonomy of users engaged in the process of IT development and use, categorising users separately as those who engage in the process of development and those who engage in the use of the developed system. Such users need not be the same as the senior managers that the NAO exhorts to engage. Assuming an IS project is a process, then some of Kappleman and McLean's taxonomy is useful, but it needs to be extended to categorise managers of the users of the process of development. Participation of users might be a consequence of senior level engagement in a project.

There are still some contradictory perceptions of participation. For instance, Axelrod (2001a) writes that participation can increase bureaucracy when in a hierarchical top-down process, such as may exist in UK central government. Handley *et al* differentiate between participation and engagement in practice that involves "hearts and minds" (Handley et al., 2007: 181), which they see in the context of learning situations and Wenger's communities of practice (Wenger, 1998).

Wenger defines mutual engagement as a dimension of a community of practice, involving engaged diversity, doing things together, relationships, social complexity, community and maintenance. Engagement is a process of community building, social energy and emergent knowledgeability (Wenger, 1998: 237). Knowledgeability is the ability to acquire and use knowledge and is a negotiation of meaning, a continual contextual process. This emergent knowledgeability may add value to a consultancy project, the knowledge being shared between client and consultant. In fact, Wenger writes that engagement "***can be a vehicle for sharing ownership and meaning***" (Wenger, 1998: 203). He further suggests the value of communities of practice because they are "organisational assets that represent investments in mutual engagement." However, communities of practice share histories, whereas projects are temporary.

In summary, the literature on participation and involvement in IS development indicates that whilst participation of users and managers in systems development activities is important, there is also a need to take account of the quality of that participation and the states of mind of the involved participant. Engagement seems to be a more general term that embraces both concepts.

2.5.3 Commitment

The term engagement has the sense of 'engagement *with*' someone, so implies some form of relationship that might require commitment. Commitment may affect sense making and the social structure (Weick, 1995). An organisational context with visibility (behaviour is public), volition (with an element of choice) and irrevocability (behaviour cannot be undone) "should generate stronger commitment" (Weick, 1995: 159). Nevertheless, commitment is "also a liability because it reduces flexibility, learning and adaption". However McCormick, who developed a survey tool to measure the impact that participation in large-group intervention had on attitudes and beliefs of participants, found engagement increased commitment (McCormick, 1999) suggesting commitment is an outcome of engagement.

Government literature implies engagement with suppliers should happen. For example,

> *"Our interviews with suppliers and departments identified a lack of engagement by OGCbuying.solutions with both the supplier and client community."(C&AG, 2006a : 29)*

And

> *"A critical element of consulting projects is therefore engagement - both of the people who work in the organisation that hires the consultants (the client) and among the consultants themselves. Engagement here implies gaining their enthusiasm and energy to see the project through to its conclusion." (NAO, 2006b: 2)*

In this context, the term 'engagement' refers to commitment and understanding how government departments and the consultants who work with them engage effectively with those involved on consulting projects. To bring about improved performance of projects requires "the regular and sustained engagement of departmental and agency boards" (C&AG, 2004). The NAO developed a framework for building commitment (NAO, 2006b) with recommendations to improve engagement, suggesting that commitment and engagement are being viewed as the same concept. Another report emphasised the importance of senior level engagement and the 'intelligent client'. 'Intelligent client' means

> *"an organisation with knowledge, skills and authority required to negotiate with and manage both suppliers and users and to contract with suppliers" (C&AG, 2006b: 7).*

Such organisations put effort into creating constructive relationships with suppliers. The NAO report backed up its advice with examples from case studies (C&AG, 2006c), implying that engagement is about creating constructive relationships, and intelligent management of suppliers at different project stages.

In summary, both academic and government literature suggest that engagement and commitment are related with the suggestion that commitment may be the outcome of engagement (McCormick, 1999).

2.5.4 Collaboration

Collaboration may also be related to engagement. Collaboration is what organisations do together and is closely related to cooperation (Huxham, 1993). To Huxham, cooperation and collaboration both mean "something to do with working together," (Huxham, 1993: 5) which is similar to Axelrod's involvement being the art of bringing people together

(Axelrod, 2001a). Huxham uses the concept of "collaborative advantage" (Kanter, 1994) to solve problems together (Huxham and Vangen, 2005). Collaborative advantage, meaning being a good partner, arises from organisations pooling resources and expertise for a common aim, creating synergy. The NAO examined how experienced practitioners achieved significant improvements in the successful delivery of projects by developing collaborative relationships, concluding "strong collaborative relationships go hand in hand with good project performance" (NAO, 2006f: 5). This might be interpreted as the NAO equating collaboration with engagement. If collaboration is an aspect of engagement then it is unfortunate if consultants do not agree to collaborate, but concentrate "on creating and handing over the deliverable" (Schaffer, 2002: 55). Schaffer proposes a paradigm of consulting in which clients and consultants can achieve value ("outstanding results") by working in collaboration (Schaffer, 2002: 121).

A reason to discard Huxham's collaborative model is that it focuses on cooperative relationships that have complementary rather than shared goals. Public sector organisations require their consultants, contractors and suppliers to share the client's goals for the IT project, and collaborative relationships are about working together, rather than a supplier-client relationship. There is an overlap, but they are not the same concept because goals differ (Lacity and Willcocks, 2000).

2.5.5 Motivation

Marcum, comparing motivation with engagement, points out that people choose to be engaged. He reviews literature on engagement from learning theory, information management and philosophy, concluding that

> *"An engagement mindset offers a more useful model for cultivating mutually beneficial working relationships with staff and colleagues … engagement is based on learning and involvement" (Marcum, 1999: 46).*

Marcum's perspective concurs with Hartwick and Barki's findings that participation and involvement depend on whether IT system use is mandatory or voluntary (Hartwick and Barki, 1994).

This review of the literature on engagement focused on conceptualisations of engagement exploring its various articulations. Much of the academic literature on engagement stresses employee or work engagement rather than person with person engagement. Whilst practitioner literature advises on the importance of engaging with clients from the consultant's perspective, there is little on either the client's perspective of the need for engagement or what client-consultant engagement might be. It is not clear how engagement manifests itself, what its factors might be or what sort of engagement leads to effective consultancy projects.

2.6 A framework from social capital theory

Previous discussion explored different constructions of engagement, but did not identify an existing conceptual framework for the phenomenon. We still do not understand the quality of the engagement, what produces it, how and whose engagement leads to effectiveness. Research is needed that looks at the process of engagement and how interaction between people builds the commitment that the NAO wants to ensure. Such research must explore how meaning is negotiated between clients and consultants and between the various clients within any one project.

Social capital theory might provide a way to explore engagement in relationships between clients and consultants in that its literature provides a framework for examining relationships between individuals. Various theorists have defined it in slightly different ways to address different contexts, but the root of the concept lies in the idea that people can access things of value because they have entered into relationships with others. Bourdieu (1986: 248) defines social capital as:

> *"the aggregate of the actual or potential resources which are linked to possession of a durable network of more or less institutionalized relationships of mutual acquaintance and recognition or in other words, to membership in a group which provides each of its members with the backing of the collectivity-owned capital, a credential which entitles them to credit, in the various senses of the word."*

Adler and Kwon (2002: 17) similarly identify social capital as "the goodwill that is engendered by the fabric of social relations," whilst Putnam (1993) sees it as arising from the stock of networks norms and trust.

People develop social capital in organisations (Bresnen et al., 2005) and organisations nurture social capital, which supports the development of intellectual capital because it comes though interaction of people sharing knowledge (Nahapiet and Ghoshal, 1998). Nahapiet and Ghoshal consider intellectual capital

> ***"to refer to the knowledge and knowing capability of a social collectivity, such as an organization, intellectual community or professional practice." (Nahapiet and Ghoshal, 1998: 245)***

To practitioners such as Singer (2003), or Stewart (1997), intellectual capital is knowledge and skills that are valuable to the organisation, and are reusable and manageable resources. Sharing knowledge, norms, and establishing social capital through people coming together on a project, provides the organisation with an economic advantage.

Nahapiet & Ghoshal (1998) suggest three dimensions for creating intellectual capital through social capital: the structural dimension of network ties, configuration and appropriable organisation; the cognitive dimension of shared codes, language and narratives; and the relationship dimension of trust, established norms and obligations of how people behave. These three dimensions are shown in Figure 2-6.

Each dimension contributes to create new intellectual capital. Combinations of the dimensions of social capital allow exchange of intellectual capital, and anticipation of value through that exchange. The "reciprocal quality of the relationship between social and intellectual capital" means new intellectual capital can feed back to social capital; "the pattern of influence may be in the other direction" and is shown as a feedback relationship in Figure 2-6.

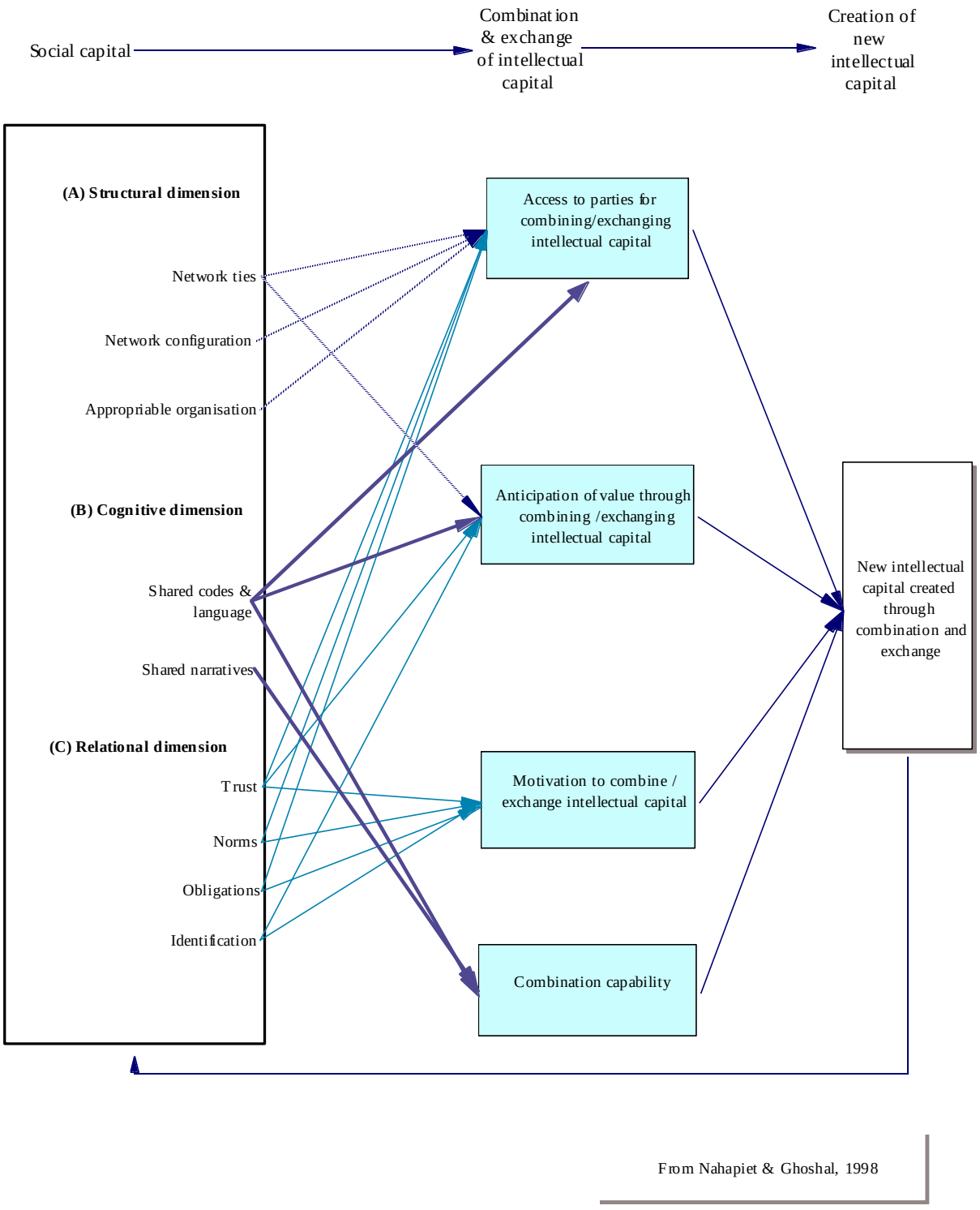


Figure 2-6: Nahapiet & Ghoshal's (1998) model of social capital

Nahapiet & Ghoshal point out, "much of this capital is embedded within networks of mutual acquaintance and recognition" (1998: 249) so interaction is essential for the development

and maintenance of social capital (Nahapiet and Ghoshal, 1998: 252), but that development requires time (Hughes and Perrons, 2010, Stalker, 2008, Maaninen-Olsson and Müllern, 2009, Nahapiet and Ghoshal, 1998: 257). However, their diagram implies that the feedback mechanism from intellectual capital is apparently the only other input needed to sustain social capital. Hence, the concept of social capital draws on social relations that already exist, but it does not explain how people construct new relationships when there is no or little previous contact. Something needs to create social capital in the first place.

In a project context, which by its nature is temporary and time bounded, the various project participants may well come without pre-existing relationships and hence, they are without shared social capital as a means to exchange and create intellectual capital. Without initial social capital, Nahapiet & Ghoshal's model cannot start to apply. Yet, intellectual capital is of value and importance to IT projects because of the need to share technical and business understanding between project participants in order to complete the project successfully and achieve economic value.

So, in an IT project, project members must create initial social capital. Social capital requires interaction between individuals in order to create and use the dimensions that Nahapiet & Ghoshal's model shows. That interaction must be a conscious choice to invest time and effort in order to form "the communicative fabric" for other conversations (McMaster, 1996: 170). It is proposed that this interaction is engagement.

In summary, Nahapiet and Ghoshal's analysis offers a structure on which to model engagement, and a structure into which engagement might feed as and when social capital is created and identified between participants. Figure 2-7 suggests a possible relationship in that something like engagement may precede and allow social capital to develop.

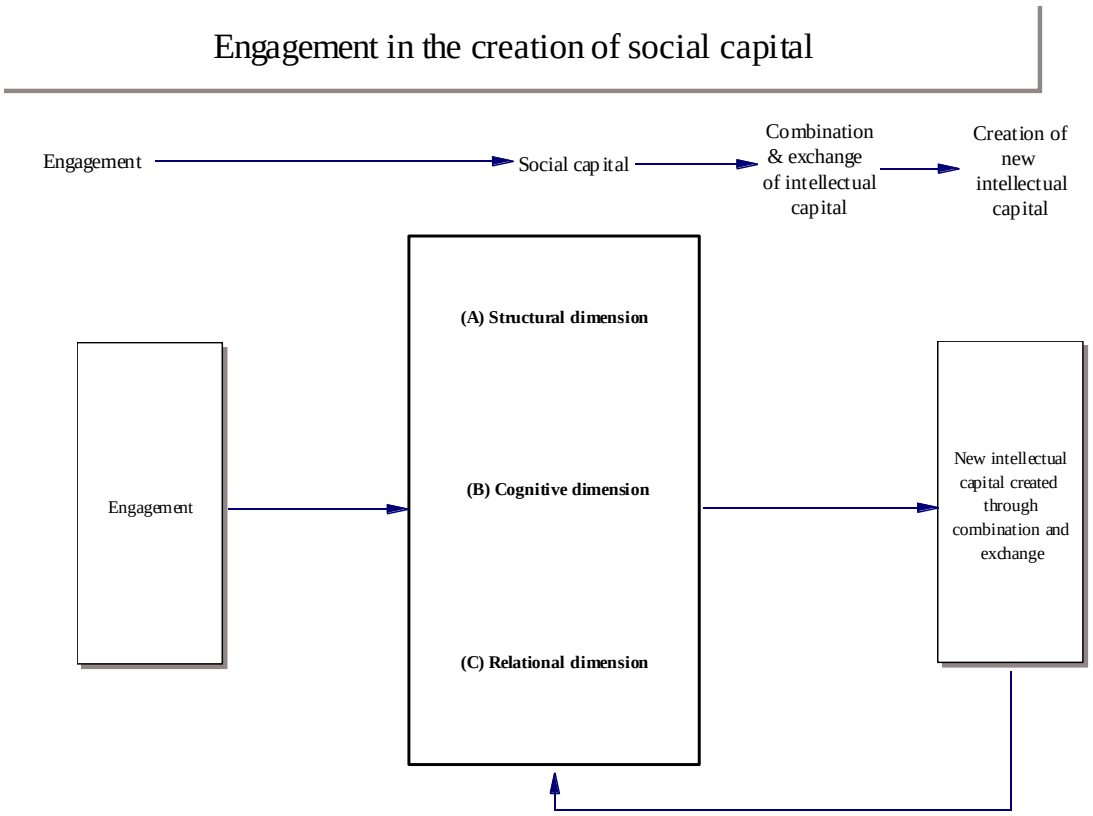


Figure 2-7: engagement in the creation of social capital

The connection between engagement and social capital is not clear, but the distinction between social capital and engagement starts from the temporal element of the time it takes to build social capital. It is posited that value of engagement may be in the behaviour between project participants that allows them to develop intellectual capital. However, social capital needs a history of relationships, and therefore the concept cannot apply to projects because projects often need to start from no previous relationships between participants. Something akin to social capital that conceptualises the development of new relationships is needed, and how the relationships allow intellectual capital to develop.

The researcher proposes to explore how the notion of engagement can be used to conceptualise the development of new relationships.

The next section will explore areas of literature that will help conceptualise this understanding of engagement, to create a conceptual framework for engagement derived

from Nahapiet and Ghoshal's framework for social capital, but more relevant to temporary projects.

2.7 An alternative framework

Engagement is rooted in relationships, but a different framework from social capital theory is required for examining the formation of new relationships, explaining how productive work is done, how temporary communities of practice establish new knowledge and how engagement helps to create value.

In considering how value is created, Moran and Ghoshal argued that two generic processes are involved: combination and exchange (Moran and Ghoshal, 1996). They identified three conditions that must be satisfied for exchange and combination of resources to happen: the opportunity must exist to combine or exchange, parties must expect the available opportunities to create value and parties need motivation to combine or exchange. Nahapiet & Ghoshal (1998) identified a fourth condition: a combination capability. It is conjectured that engagement also involves combination and exchange, creating project value though creation of intellectual capital.

The essence of the Nahapiet and Ghoshal model influences the development of the conceptual model for understanding engagement, the idea that there is a relationship between the context of organising, the quality of social relationships and their effectiveness in producing shared knowledge and understanding. However, in the context of temporary, IT projects where there are commonly no established relationships between consultants and clients, it does not seem helpful to separate analysis of the nature of relationships from the knowledge development work that these relationships are capable of undertaking. In IT projects, relationships need to form and do productive work all at once. So, the conceptual model of engagement focuses on two kinds of phenomena: (a) the conditions from which relationships emerge and (b) the engaged behaviours that may result.

It is posited that certain conditions will influence the behaviours of the participants, allowing them to undertake what could be described as engaged behaviour. Therefore, the next section discusses extant literature to conceptualise in more detail possible components of engagement, recognising that some are interrelated.

2.8 Components of engagement

From the literature, engagement appears to require an environment that allows communication, participants to communicate and who have some expertise to contribute, and behaviours of sharing, sense making and adapting. It is conjectured that these may be components of engagement and they interact to create intellectual capital of value to the client organisation. These components are shown in Figure 2-8: initial conceptual model for engagement.

It may be useful to consider engagement in terms of communication that allows a process of emergent knowledgeability (Wenger, 1998: 237). A structure that allows communication of knowledge appears necessary.

> ***Communication is a complex process of human sense reading and sense giving (Walsham, 2002: 7)***

Communication and knowledgeability are different but interrelated with some overlaps. Communication requires participants and an environment; knowledgeability is being able to acquire and use knowledge. Communication is about a context that allows communication of knowledge through participation and mutual networks. In the context of IT projects, communication between project participants may be seen "as an analogue process that aims to share tacit knowledge to build mutual understanding" (Nonaka, 1994: 16-17). This process of communicating requires people, who send, receive and share information through dialogue and materials (Beers et al., 2006) shared in the context of the project.

Knowledge emerges from everyday activities (Orlikowski, 2002). Knowledgeability, the ability to acquire and possess knowledge, is a term that Wenger uses when indicating the relationship between participation and learning within communities of practice:

> *"If we believe that people in organisations contribute to organisational goals by participating inventively in practices that can never be fully captured by institutionalised processes [….], we will have to value the work of community building and make sure that participants have access to the resources necessary to learn what they need to learn, in order to take actions and make decisions that fully engage their own knowledgeability." (Wenger, 1998: 10)*

Emergent knowledgeability is a process of engagement (Wenger, 1998:237) within a context or situation. It implies people need to know something that they want to use and apply in a new context, such as on a new IT project.

This discussion above identifies a need to consider engagement as composed of conditions that allow processes of engagement, and activities that might be engaged behaviours. Similar to Nahapiet and Ghoshal's model of social capital, these conditions and behaviours combine and are exchanged in order to benefit the project. The next sections will discuss first conditions and then behaviours.

2.8.1 Conditions of engagement

This section will discuss components with reference to Figure 2-8: initial conceptual model for engagement.

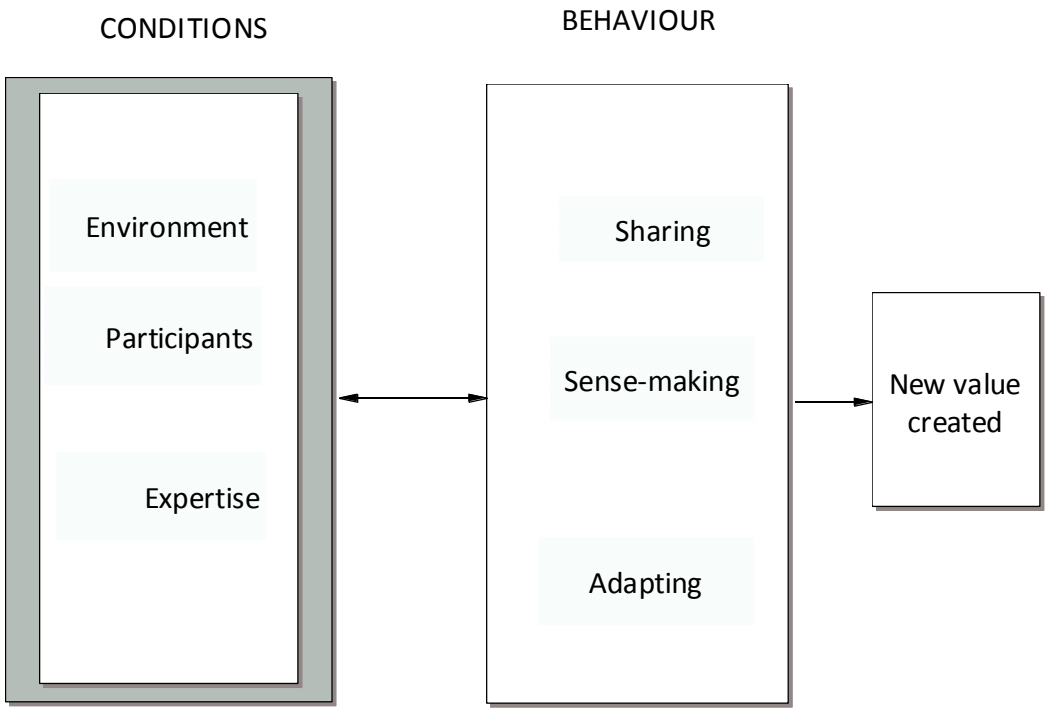


Figure 2-8: initial conceptual model for engagement

Communication

A simple model of communication (Shannon and Weaver, 1949), built on a metaphor of transmission, provides the structure for communication. It is simple in that its components require a source, a receiver and a channel. Sources and receivers might be project participants, and channels might be face-to-face, paper or electronically based. However, such a model does not take account of meaning or of the influence of the context on meaning (Chandler, 1994). It makes no provision for feedback and it ignores the semantic understanding that participants socially construct.

Communication, as a process of sense making and giving (Walsham, 2002), of people using dialogue and materials (Beers et al., 2006) and emergent knowledgeability (Wenger, 1998) may include components of a context or environment, participants who can share and make sense together, and expertise. These components will now be discussed.

Environment

Environment is the physical or virtual context in which people interact. Environment includes space or place, time and the material objects with which people interact. Place, material objects and time will now be discussed, all being considered part of the environment.

Nonaka described Ba (equivalent to "place" in English) as a shared space for emerging relationships, which can be a physical, virtual or mental space (Nonaka and Konno, 1998). A shared space for emerging relationships can be a physical, virtual or mental space (Nonaka and Konno, 1998). Skerlavaj (2006) found physical proximity enhances learning. The physical structure of a room should allow for easy communication. For example, round tables are more indicative of a democratic approach to listening and decision making than an auditorium with fixed seating facing forward (Block, 2000: 277). Sturdy et al suggested that consultants and clients could cross or blur boundaries by meeting in other than at routine places and times, in liminal spaces, spaces where institutionalised or cultural rules, norms and routines are suspended (Sturdy et al., 2006: 932).

Context and materials provide affordance. Affordance (Norman, 1998: 9) is a design concept about what the context invites people to do. Orlikowski (2006: 465) suggests that "the materiality of infrastructures, spaces and technological artefacts structure […] knowledgeability" thus extending context to include other material objects. Materiality is the physical or virtual context in which people interact, including the material objects that they work with. Such material objects include shared physical tangibles, site and documents as well as virtual or electronic environments, and intangibles such as time. Objects that are shared and sharable across different key parties are boundary objects (Carlile, 2002, Bechky, 2003, Star and Griesemer, 1989) and can help solve problems. Skovgaard-Smith observed consultants facilitating discussion using flipchart material, which provided a tangible aspect of consultancy service to the group.

Context affords combination capability. Interactions on consulting projects may occur in informal contexts, alternative times and places (Sturdy et al., 2006). Material objects "*participate in the constitution of the social dynamics of organizations*" (Bechky, 2003: 746). Beers (2006) examined negotiation of meaning, and demonstrated that setting up a formalistic discussion using materials such as flip charts and boards, facilitated clearer definitions of meaning and shared understanding. Beers' research (2006) raises expectations that materiality would ease and enhance sense-making behaviour and an appropriate context enhances participation.

Time is another aspect of environment, crucial in combination with space, to projects (Maaninen-Olsson and Müllern, 2009). Orlikowski, using a scaffolding metaphor, for knowing suggests that

> *"Scaffolds are emergent – they are erected over time, changing in form and function, as needed to continue supporting the changing scale and scope of the element(s) being built over time" (Orlikowski, 2006: 462)*

Such scaffolds of knowing afford a temporary stability (Orlikowski, 2006). In summary, the aspects of environment in IT projects that are likely to be relevant to understanding engagement are shared space and material objects.

Participants

Participants are an essential component of communication because direct participation can be a driver for engagement (Marcum, 1999) and McMaster relates knowledge to participation (McMaster, 1996:168).

Participation may be about willingly joining in, the participant's willingness being a driver that motivates engagement (Marcum, 1999). Academic IT literature (Aubert et al., 2008, Barki and Hartwick, 1994a, Hartwick and Barki, 1994) considers user participation to be a critical factor in testing new computer systems, with implications that participation leads to better outcomes including involvement and positive attitudes (Barki and Hartwick, 1994b:74). Management participation is also necessary (Hales, 1993, Loonam and McDonagh, 2005, Powers and Dickson, 1973) though on its own, is not sufficient because commitment from a senior manager as champion is needed (Wui-Ge et al., 2009). Another reason for suggesting participants as a component or condition of engagement is that the literature on communities of practice suggests that widening the circle of participation helps to connect people and create communities, allowing access to key parties (Wenger, 1998, Wenger, 2000). Creating communities provides networks and appropriable organisation. Participation assumes activity from people and anticipates value. If there are too many participants however, disadvantages may accrue. Disadvantages include bureaucracy and spreading the ability to contact people too widely, meaning that perhaps no one person takes responsibility. Therefore, the research will attempt to identify the participants who participated, looking for sufficient and appropriate participation, hence focussing on both who is needed and how willing they are.

Trust

Trust has been defined as

> *" the willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor or control that other party" (Mayer et al., 1995).*

Trust was considered as a facet of the communications component of engagement because trust provides a competitive advantage to the consultant, being an element of the affective side of the client-consultant relationship (Block, 2000: 14). Block suggests expressing distrust verbally in order to build up trust, by for example, asking clients whether they trust the consultant's confidentiality (Block, 2000: 15). Czerniawska (2006a) agrees that trust is fundamental to consulting. When assessing project stakeholder relationships, Pinto et al (2008), indicate that trust enhances critical stakeholder relationships and is valuable for managing inter-organisational relationships. Fukuyama (1996) relates trust to culture, considering networks as a means of trust generation that can save on transaction costs.

However, the concept of trust is not included in the initial model of engagement. Although, Nahapiet and Ghoshal include it in the sense of the relational dimension of social capital, the facets of the proposed model of engagement are expected to be distinct from those of social capital being conditions that afford engagement, and it is assumed that trust cannot exist until the relationships are built. In fact, Saks (2006) has pointed out "trusting relationships evolve over time," so trust cannot be something that exists to start with. Secondly, trust does not seem to be a factor of great importance in the review of engagement literature. As the factor seems to add little additional value to the framework, it is omitted, in the interests of building a parsimonious model (Whetten, 1989).

Expertise

Expertise comes with people who have expert skills, or interpersonal skills or information or experience to share (Axelrod et al., 2004). A participant must have expertise or knowledge and contribute it. Expertise is little use unless it is contributed. Expertise on IT programmes includes technical and management expertise. Technical expertise is the foundation for consulting skills but interpersonal skills are also needed to function with people (Block, 2001: 5). Although Block says that the core of the "consultancy contract is the transferring of expertise from the consultant to the client" (Block, 2000), engaged behaviour requires sharing expertise in both directions on the client-consultant relationship and socialisation is a

factor that helps the transfer process (Nonaka et al., 2000). With time, members become more active and engaged within a community, and assume the role of expert (Lave and Wenger, 1991). Having expertise without the will, the social or communication skills to share that expertise would mean that a contribution would be lacking. Learning systems require expertise and contributions to practice (Wenger, 2000).

2.8.2 Behaviours of engagement

Emulating Nahapiet and Ghoshal's model that combined dimensions of social capital, the researcher proposes that conditions in combination allow particular behaviours. These behaviours will now be outlined and discussed.

Sharing

Sharing sustains relationships as long as it delivers mutual value to participants(Wenger, 1998: 184). Increased sharing of tasks, facilities, language, experiences and commitments results in a sense of mutuality or independence (Cropanzano and Mitchell, 2005). All parties on a project need to participate: contractors, developers, users, client side and consultants, so participation must be mutual. Mutual engagement or cooperative interaction that members of communities develop together helps learning (Wenger and Snyder, 2000:8). Mutuality could be a facet of both communication and knowledgeability components of engagement. Participants might share materials (Star and Griesemer, 1989), knowledge (Nahapiet and Ghoshal, 1998), and relationships and ownership of meaning (Wenger, 1998). Participants that share knowledge enable others to become more knowledgeable (Orlikowski, 2002).

Some value is anticipated through sharing skills. For project communication to succeed, people need to ensure shared meanings are established to guide decisions and actions (Jackson and Klobas, 2008). Jackson and Klobas see knowledge as shared understanding, gained through a process of continual sense making and is a social process. They argue that an organising principle for systems development projects is to take an approach based on the

philosophy and sociology of knowledge because the basic principle of understanding is a critical success factor in projects.

Sense making

When sense making occurs, members of, and across, communities get clear understandings of each other and how issues are being seen, negotiating meaning together to make sense of each other's experiences and can co-construct knowledge (Lave and Wenger, 1991).

> ***"Participation is always based on situated negotiation and renegotiation of meanings in the world. This implies that understanding and experience are in constant interaction – indeed, are mutually constitutive" (Lave and Wenger, 1991: 51).***

The diverse experiences that draw people to a project mean groups may not have shared representations, interpretations and systems of meaning so meaning must be negotiated in order to get those shared understandings. That implies that negotiation is required before the key parties can co-construct knowledge (Lave and Wenger, 1991). Negotiation over expectations is needed because people have unspoken assumptions. You cannot negotiate meaning without mutual participation; you have to want to know. Negotiation "conveys a flavor of continuous interaction" (Wenger, 1998: 53) where members engage in dialogue. Weick, who identifies seven characteristics of sense making: identity, retrospection, enactment, social ongoing, extracted cues and plausibility rather than accuracy views "people interacting to flesh out hunches" (Weick, 1995: 133) as cyclic sense making behaviour.

Adapting

Adaptability (or adaptation) is the ability to change with new learning. People adapt how they share their expertise, adapt to the situation and adapt to the people that they work with. It is not the ability – it is the action through wanting to adapt, the volition to align effort, and to combine information or experience, including revising one's goals (Klein, 2009). A system for adapting provides the capability to act, the verb to adapt. The word 'adapt' matches the other verbs of behaviour.

In order to use expertise, people have to be able to adapt to feedback. Feedback is necessary for negotiating meaning and adapting with new understanding. Adapting allows change with new learning, knowledge and new experience as people gain new expertise through their relationships with each other. Socialisation helps the transfer process (Nonaka et al., 2000) so people "understand [...] expertise through practice and demonstrations." People adapt with learning and adapt how they share their expertise, adapt to the situation and adapt to the people that they work with to anticipate value. By aligning effort, (Orlikowski, 2002) adapting enables combination of information or experience so might be a facet that coordinates the two components of communication and knowledge. Adaptability skills overlap communication, because people adapt their communication according to what they share through environment, relationships and newly shared knowledge. Material objects can also be adapted to the needs of stakeholders (Star and Griesemer, 1989: 393) so, for instance a project plan could be adapted when business change happens.

2.8.3 Summary of components

To relate these components of engagement, Figure 2-8 implies that environment, participants and expertise are conditions that afford behaviours of mutual sharing, sense making and adapting. Hence, the single arrow in Figure 2-8 implies actions arising from the conditions. This is similar to Nahapiet and Ghoshal's model of social capital where they suggest conditions of social capital that in combination afford behaviours that create new intellectual capital. However, the single arrow in this model is double-headed to allow the possibility that behaviours influence conditions. The research starts from the model in Figure 2-8 and looks to see if the interactions between conditions and behaviour help to understand the phenomenon of engagement.

Finally, it is anticipated that engaged behaviour produces value, so the next section will develop the model to incorporate the production of value.

2.8.4 Value of engagement

Figure 2-8 includes a box to represent the concept of value, and a link to imply that engaged behaviour is expected to produce value.

Types of value include customer or employee satisfaction, revenue growth, cost reduction, and risk management and these may have been considered in the project business case. A project's success is often measured by its outcomes: finishing it on or near time, on or within budget, and achieving all or most of the original objectives, whether they be growth, reduction or risk management. Amyas Morse, head of the National Audit Office, believes:

> *"Departments need better information and skills in order to achieve good value for money from their use of consultants. They need to do more to integrate their decisions to use consultants within their wider workforce planning; define the services required; know how the consultants' work is contributing to departmental objectives; and evaluate performance during projects and assess what benefits, if any, have been delivered." (NAO, 2010a)*

The value of an IT project may be considered to arise from the benefits it achieves over and above the costs of its development. However, UK government departments look for an optimum combination of cost and quality (OGC, 2002b, OGC, 2002c).

Traditionally, the client expects that the value of a consultancy project to be through the consultant having, using and transferring knowledge (Block, 2000). However, the consultant needs to know and understand the clients' requirements, before being able to provide the required advice or IT system, because, after client participants have shared knowledge of requirements, consultant participants acquire understanding through sense making behaviours.

Knowledgeability is the ability to acquire and possess knowledge (Wenger, 1998:10), and emergent knowledgeability is a process of engagement (Wenger, 1998:237). The concept of knowledgeability comes from Nonaka's 1994 framework of the continuous feedback between tacit and explicit knowledge, developed by individuals and through organisations articulating and amplifying that knowledge (Nonaka, 1994). There may be value in emerging knowledgeability.

Engagement may produce value other than an exchange of intellectual capital (Nahapiet and Ghoshal, 1998); its value comes through: more capability and improved productivity (Axelrod et al., 2004); positive consequences for organisations (Saks, 2006); people aligned around a common purpose and grasping issues (Axelrod, 2001b); visible leadership and ownership (C&AG, 2009b). Value also comes from short term help with challenges, access to expertise, confidence, fun with colleagues, meaningful work, problem solving, time saving, knowledge sharing (Wenger, 2008). Engagement sparks creativity, produces ownership, builds trust and creates common languages (Axelrod, 2001b); engagement may also increase commitment, give a better understanding and a greater feeling of community (McCormick, 1999, Weick, 1995). Capabilities, task contingencies and social capital create value that supports the social structure (Adler and Kwon, 2002). Value is created and may be appropriated from collaborative relationships (Wagner et al., 2010). For the UK public sector, value is considered as value for money. In procurement, value for money (VfM) is not the absolute price, but a relative figure.

> *"the optimum combination of whole life cost and quality (or fitness for purpose) to meet the user's requirement" (OGC, 2002b: 3)*

Value for money indicators include cost of IT function, IT competence of the user and the percentage of incidents resolved (HM Treasury, 2009: 100). It might be that engagement improves value for money by reducing costs, mitigating risks so that project participants are more productive.

2.9 Conclusion: the gap in literature

Given the paucity of satisfactory literature on engagement, it has been necessary to review related literature on articulations of engagement, but this literature has not helped explain engaged relationships on consultancy projects. Although social capital theory provides a framework to explain how relationships can produce intellectual capital, the theory cannot be applied to projects because projects often start from no previous contact between participants; projects are time bounded and unique. Nahapiet and Ghoshal's model (1998)

of social capital assumes existing network ties, shared languages and codes, and existing trust and norms. Since projects participants come new to a project, it cannot be assumed that they have existing network ties, or share language and codes. Existing trust and shared norms cannot be assumed either. Hence, there is a problem with using social capital theory to model relationships between project participants. Therefore, an alternative framework is needed similar to social capital, but a framework that rather than reifying social capital conceptualises the development of relationships in a different way, as an active process that is called engagement. Extant literature does not provide a framework to explore engagement on projects and hence this study has developed the framework shown in Figure 2-8 by drawing on related but disparate literature. The resulting conceptual model is simple enough to provide themes and deductive codes for engagement, and this model, used as the starting point for the analysis described in the next chapter, allows exploration of interactions between conditions and behaviours, such focused codes leading to template analysis and inductive coding.

2.10 Research questions

The above discussion suggests research questions of how participants engage with each other on projects, particularly public sector IT projects. There is an interest in how clients engage with their external consultants and IT suppliers, and there is a question of how engagement between participants on IT projects produces value. With the aim of understanding how public sector participants engage with their external consultants on IT projects, the research questions are therefore:

> What behaviours are required for engagement?
>
> Which conditions are important for producing engaged behaviours?
>
> How do conditions and behaviours interact?
>
> What kind of value results from engagement and how is it produced?

Empirical answers to these questions could address a gap on understanding engagement between consultants and clients. Insights could also contribute to public sector practical

management of external professional service providers to reap value from their contribution to a project.

By drawing on existing literature and research, this review has addressed questions of how possible conditions and behaviours might afford productive engagement, and how these questions might be conceptualised by a model that enables the researcher to analyse and reflect on observations of engagement. Having developed a possible model for how engaged behaviour occurs, the next chapter will explain how the questions were researched and how the research methodology arises from the research framework.

3 Methodology

3.1 Introduction

The literature review in chapter 2 established the research aim was to investigate how engagement happens between public sector clients and their consultants or suppliers on IT projects, and how this produces value. The literature review found that current research could not address this issue, so now this chapter will address the question of how one might gain knowledge and form meaning about the phenomenon of engagement.

This chapter focuses on the best means for acquiring knowledge about engagement. It is structured around phases of research that Denzin and Lincoln (2005: 23) see as defining the research process: perspectives, research strategies, methods of data collection and analysis. The section on perspectives explains why the chosen approach answers the research questions. The section on research strategies describes the strategy and design behind the choice of methods. The third section describes the methods and procedures for collecting and analysing data, that is, what was done to collect and analyse the data. Finally, the researcher's approach to the ethics of the research will be described.

3.2 Perspectives

Research approaches require beliefs and perspectives of understanding how things are connected, and so the researcher's ontological position determines what the researcher can claim to be valid evidence for the assertions the researcher makes about the world. The researcher needs to surface those assumptions about reality in order to understand the appropriate methods to acquire knowledge of the phenomenon being investigated. The best way to grasp that the researcher has an ontological position, to recognise it and its implications for the research, is to consider some different ontological perspectives (Mason, 2002: 14).

Ontology is a set of assumptions about what is real, which means studying being (Guba and Lincoln, 1989: 83); ontology informs the theoretical perspective for studying the nature of existence. Two ends of the ontological spectrum of ontological belief are represented by the positivist and the interpretivist perspectives. The positivist perspective has a conventional scientific belief system. Epistemologically, the approach assumes knowledge is only of significance if it is based on observation and reality. For realists, "events are explained in terms of generative mechanisms" that "reside in structures" (Tsoukas, 1994: 28), and these generative mechanisms exist even when they are not acting. The realist perspective takes the stance that things exist independent of human consciousness, thus overlapping the positivist perspective. IS research has been dominated by the realist perspective (Orlikowski and Baroudi, 1991), an advantage of a realist perspective being that it fits well with the reality of an applied discipline (Mingers and Willcocks, 2004). A disadvantage is that different people make meaning together and separately, realising different and subjective realities that realism cannot mirror or analyse.

The interpretivist perspective sees people and their interpretations as primary data sources (Mason, 2002: 56). People interpret the world only through interacting with it, needing frameworks to understand it. How people interpret the world depends on which framework they use, and using different frameworks means that they interpret the world in a different way. An epistemological approach within the interpretivist perspective is constructivism, which asserts that the only world we can study is "a semiotic world of meaning" with symbols such as language that people use to think and communicate (Potter, 2006: 79). Rather than recognising an objective reality, a constructivist perspective believes that a person subjectively understands the world, and has mentally constructed meanings of reality. A relativist position assumes different observers may have different viewpoints (Easterby-Smith et al., 2002: 32). People have signs and symbols for understanding what each is doing and use rich forms of conversations that are adequate for dealing with the complexity of social relationships. Thus, the relativist ontological position of constructivism provides the

warrant to consider the views of project participants, as legitimate emic constructions not biased perceptions (Guba and Lincoln, 1989: 185). A variant of the realist position is critical realism, which starts with realist ontology and incorporates an interpretivist thread (Easterby-Smith et al., 2002: 33), thus by combining realist ontology with interpretivist epistemology (Crotty, 1998: 11) provides a compromise between realism and interpretivism.

Disadvantages of the constructivist approach exist. Subjective judgements used to collect the data affect construct validity (Yin, 2003: 35). Czarniawska warns of the difficulties of employing the constructivist stance because researchers conventionally use the logic of representation, but the medium of everyday organisational life is the logic of practice, which can lead to difficulties of communication between researchers and managers (Czarniawska, 2001: 253). For example, interview questions can be interpreted differently by the interviewee from how the interviewer intended, thus eliciting unexpected and less helpful answers than intended. Using multiple sources to collect interview data counteracts this. Furthermore, gatekeepers can receive and comment on draft reports of the research.

3.2.1 Approach chosen

The research questions necessitate an investigation into engaged relationships, and production of value, with the aim of uncovering peoples' meanings and perceptions of engaged behaviour on IT projects. A reason this research should use a constructivist approach is that project participants construct each other's behaviours in the context of a project and shape each other's understanding. Examples of this approach discussed in the literature review include, constructions of client models (Bovens, 2007, Schein, 1997), communities of practice (Wenger, 1998), and the importance of space and time for understanding projects (Maaninen-Olsson and Müllern, 2009). This research takes a critical realist perspective because, although IS projects take place in real objective spaces, the social position of each individual participant influences how they construct themselves in a particular way in relation to the project setting. An advantage of such an approach is that "it maintains reality whilst still recognizing the inherent meaningfulness of social interaction"

(Mingers, 2004: 99). Hence, engagement can be explored as a real phenomenon, whilst still recognising that IT project participants may be relatively unaware of the phenomenon.

Different ways of carrying out research can be based on different ways of thinking logically: deductive, inductive and abductive thought. Deductive thought starts from theory first, and theoretical propositions can be generated and modified by empirical research, moving from the general to the particular (Mason, 2002: 180). Inductive thought starts from the empirical research, and theory is created from the emerging analysis of the data (Mason, 2002: 180). A disadvantage of induction is that it is blind to the need to build cumulative bodies of knowledge (Silverman, 2005: 79). The exploratory research agenda for this research focuses on the development of abductive theory, which is associated with an interpretive tradition (Mason, 2002: 180) and an iterative process of moving between data and experience and broader concepts. Abductive thought, "the process of exploratory hypothesis" (Pierce, 1955: 67 in Potter (2006: 85)) for the phenomenon of engagement has required moving between theory and data, thus allowing the possibility of constructing new theory through abductive logic.

3.2.2 Alternative strategies considered

Questionnaire survey, longitudinal study and narrative method were considered. A questionnaire survey of project participants' relationships was considered as a means of identifying dimensions of social capital, particularly structural social capital, but that would not reveal how people perceived engagement. In addition, access constraints militated against this approach. First, it was not known which participants were available for interview until close to interview dates or on the day itself, and secondly, such an approach might have brought information on project participants who had not explicitly agree to the research, which might be unethical. Thirdly, recognising early that access difficulties were likely in the public sector, the researcher could not anticipate gaining access to a large quantity of survey data, so the survey approach was discarded. Fourthly, and most importantly the constructivist nature of the phenomenon of engagement does not lend itself

to the somewhat formal and positivist approach that a questionnaire with Likert scales offers. In addition, a survey may be too static to capture changing behaviours in a new project context.

An alternative longitudinal and ethnographic approach was mooted. To be present on a public sector IT project in which consultants were used would allow observation and perhaps participant observation. However, there were several difficulties to this approach. First, the researcher was not employed or security vetted by any public sector organisation, so was not allowed such close access. Secondly, a longitudinal study would take more time than was available. Thirdly, although such a single case study would demonstrate how one particular organisation and its environment could influence engagement, limiting the research to one intrinsic case study would also reduce the possibilities for analytic generalisation.

A narrative method (Czarniawska-Joerges, 1998) takes the view that it is possible to understand behaviour through the verbal medium, and that therefore researchers should collect stories about events (Easterby-Smith et al., 2002) and so this approach was borne in mind when designing the interview schedule. However, it seemed difficult to use to address research questions that concern groups of people working on a project, and might not collect sufficient data about participants.

In summary, a questionnaire would not explain people's attitudes to relationships, a longitudinal study would take more time than available, as well as being difficult to access because of public sector security concerns and a narrative method might not bring sufficient relevant data.

3.3 Research strategies

This section sets out and justifies the chosen research strategy explaining the plan of action that shapes choice and use of method, and linking the choice to the required outcomes (Crotty, 1998).

This research has some parallels to appreciative inquiry (Cooperrider and Srivastva, 1987).

> *"Appreciative inquiry is the cooperative co-evolutionary search for the best in people, their organisation, and the world around them" (Cooperrider et al., 2003: 3).*

Appreciative inquiry (AI) is an action research approach to organisational development that inquires into what works and how it would work better, so investigating effective client-consultant relationships might be considered similar to appreciative inquiry. Drawing on appreciative inquiry is often used in such circumstances and effective engagement is in the same field. The case studies where relationships were effective led to data similar to that that might be obtained through appreciative inquiry because the case study examples demonstrate positive states of affairs.

However, the original aim was to investigate the client-consultant relationship including problematic areas, and this aim was adapted to stress effective relationships only in order to achieve otherwise difficult access, so the research aim was not considered to be an AI aim. Whilst this research design does not take an AI approach, it is recognised that the case study data may imply that some effective relationships may have come about through participants using an AI approach to working on IT projects. Nevertheless, this was a research investigation rather than practical action research and as such, the research questions reflect that perspective. Moreover, the interview questions were not deliberately crafted as "unconditional positive" questions (Cooperrider et al., 2003: 3). Accordingly, the detailed methodology is less aligned to action research than the high-level design perhaps appears.

The research setting for the exploration of the issues of client-consultant relationships was public sector IT projects or programmes, whose features were explored in the literature review chapter. Several features of IT projects make their consideration of particular interest. These include their requirement to bring in diverse skills from diverse organisations and their tendency to be of a defined time span and required to complete within a given budget and with given outcomes. Therefore, it may be possible to collect data from diverse sources, and a case study approach is appropriate because it allows a

combination of methods of data collection (Blaikie, 2000). A case study approach allows exploration, description and explanation, strategies (Yin, 2003) that might be appropriate for answering these research questions. Case studies are also useful for understanding how the organisational context influences social processes, and for exploring new and emerging behaviours (Hartley, 2004: 325).

3.3.1 Case study research design

Each unit of analysis must include a variety of perspectives of relationships between participants all on the same project and thus the unit of analysis is the project. A project involves a number of participants together with documentation, such as guides, project initiation and closing documents. The aim was to obtain project documentation, speak to a variety of people on the project and to observe meetings and meeting places. Methods of data collection included observation and documentation as well as in-depth semi-structured interviews. Gathering data on the nature, background, setting, other context and informants allows the researcher to probe the particularity of the phenomenon under investigation (Stake, 2005: 447). However, interviews with individuals were not sufficient to discover how they work together. Rather, it was necessary to get the perspectives of a number of different participants on the same IT project to allow triangulation. Hence, this study used a case study design that enabled multiple approaches to the research. A case study being a study of one project helps understanding of how the organisation environment and context influence the phenomenon under investigation (Hartley, 2004: 325, Yin, 2003). According to Yin (2003),

> *"A case study is an empirical inquiry that investigates a contemporary phenomenon within its real-life context, especially when the boundaries between the phenomenon and context are not clearly evident." (Yin, 2003: 13)*

This suggests that a case study approach is an appropriate method to use to investigate a phenomenon such as engagement.

Case studies may be intrinsic or instrumental (Stake, 1995). An intrinsic case study would be used when there is a need to understand that particular case in detail, whilst an

instrumental case study provides insight to an issue or phenomenon. The research aim is more about the phenomenon of engagement than about the particular individual case studies themselves, so multiple instrumental case studies are an appropriate choice. When a number of cases are studied jointly the research is "instrumental study extended to several cases" (Stake, 2005: 445). Multiple-case design is value for interpretivist studies because it also permits theoretical replication logic through analytic generalisation and the findings are likely to be more robust (Yin, 2003: 47-51). This research by using multiple case studies, also allows triangulation of data (Eisenhardt, 1989) and improves validity by providing more perspectives (Easterby-Smith et al., 2002: 53).

3.3.2 Case selection and sampling

Flexible and opportunistic data collection methods for entering the field may allow investigation of emergent themes and unique case features (Eisenhardt, 1989), and such an approach was purposefully undertaken. A convenience sample of cases was obtained to represent a variety of public sector organisations that used external professionals on their IT projects, and are described in the next chapter. These case studies were similar in terms of features such as public sector, having IT requirements, involving IT projects or programmes and using consultants, but they varied in terms of size, budget, and number of people involved, procurement and systems development. The variety of organisations represents central and local government and a non-departmental public body. The external professionals were suppliers, contractors and consultants. These features are shown in Table 3-1. This variety allows a spread of examples in different settings, which helps to support emerging conceptual insights (Yin, 2003) and may enhance validity.

Table 3-1: features of the case studies

Case	A	B	C	D	E
Sector	Island government	Island government	Local government	Central government	Non-departmental public body
Requirements	IT strategy	Systems development	Appraisal of IT options	Systems development	Systems analysis

Case	A	B	C	D	E
Programme or project	Programme	Project	Project	Programme	Project
Budget	Unknown	£450,000	£27,000	Unknown budget, but the programme was worth £30,000,000	£30,000
Number of people involved	Up to sixty in the IS department, at least one consultant, six or more contractors	Four or more users, plus unknown number of contractors, plus at least two consultants	Three clients plus the consultant's informants	Up to forty suppliers plus contractors plus client staff	Five clients plus the consultant's informants
External professionals	Consultants, contractors	Consultants, contractors	One consultant	Suppliers, contractors	One consultant

Access for case studies was negotiated to local government organisations, central government departments, a non-departmental public body (NDPB) and an island government, providing five usable case studies. Access to the island government was through a personal contact who worked for an IT supplier. Access to central government departments came through visiting a government supplier exhibition and sharing information with an employee at the Office of Government Commerce (OGC) who was about to be seconded into a central government department. Access to local government and the NDPB came through personal contacts.

Three informative documents were provided as part of the access procedure. First, when requesting or negotiating research access, an initial document that briefly indicated requirements and approach was provided to the gatekeeper. See Appendix 8: research requirements and methodology on page 315. Secondly, either at interview, or via email, an information sheet for participants was sent with a brief explanation of the research and contact details for the researcher, shown on page 316. Thirdly, at interview, each participant was asked to sign the consent form and left with a copy.

After access was gained to a gatekeeper, some informants in case study A displayed so much pride in their work that it appeared that they were keen to self-select implying bias, though it is known that at least one (willing) informant was told to participate in the research. In case study C, access to an initial gatekeeper was used to negotiate access to two other interviewees. In the sense, that these case studies fulfilled the requirements as given to the gatekeepers for projects to use for research on engagement, from the gatekeepers' and the participants' perspectives, these case studies demonstrate engagement. An interesting feature is that the gatekeepers identified case studies that all appear to be successful projects. Although this feature was not a planned part of the research design, the design remains valid in that it still allows the investigation of the phenomenon of engagement, and the development of a contextualised model of engagement that could be tested through further research on less successful projects.

3.3.3 Methods and procedures for collecting and analysing data

This sub-section is about data collection and interviewing, transcription issues, analysis and verification. Observation and the examination of printed and electronic documents were also used to provide further insights. Thematic analysis techniques were then used to examine the key themes in the interview texts as well as to analyse documents in more detail.

The researcher collected data through semi-structured interviews with key persons involved in the case projects: project managers, coordinators, procurement managers, ISD users and people from both the public sector client side and the supplier or consultant's side. Other sources included observations and documentation on the projects, programmes and the organisations and some photos. See list of fieldwork equipment in the appendix on page 320.

Interviews

The next sub-section first discusses types of interview questions and then describes the interview guide. It outlines the pilot interviews, and then explains the interview coding and analysis.

The design required interviews for the following reasons. First, the people involved in public sector projects have project experience, understanding and views of their working relationships that might cast light on the research questions. Secondly, people in different roles on projects may have different skills and expertise yet share a common aim. The interviews were designed to elicit their different perceptions of engaged relationships with each other.

Types of interview questions

Kvale (1996: 133) elaborates on types of interview questions: introducing, follow-up, probing, specifying, direct, indirect, structuring questions, interpreting questions and silence. Some of these questions can be planned, like introducing, specifying and direct questions, but it is not possible to plan follow-up or probing questions when an interviewer has to be listening, and must react to the information in situ. There were few why interview questions (Kvale, 1996, Kvale, 2007: 131). However, one, used as a probing question (Kvale, 2007: 60-65), was revealing, when someone said, "It's changed", and the researcher asked, "Why do you think it's changed?" The interviewee wondered if the organisation was doing something different, and if it was something to do with using consultants.

Interview guide

The guide shown on page 312 was used to collect data for the case studies, and it seemed from initial data analysis, that this interview schedule was eliciting relevant information about engaged behaviour. However, the coding structure for analysis was developed to reflect the emerging conceptual framework.

Some interview questions elicit information in more than one component, as shown in Appendix 8.7 at Table 8-6 on page 313 that matches interview questions to research questions. Questions are based round four headings: background (of project and participant), relationships, knowledge (or learning), and value. The guide aided the interviewer to pose clear questions that interviewees understood about relationships, concepts used and understanding.

Background is important for ensuring the context is understood.

Relationships and communication are important to finding how engagement creates and influences relationships, and produce value. The interview questions here concern the influence that relationships have on how people engage. Answers may identify aspects of participation and mutuality. The questions may also elicit how people negotiate and share meaning. One question addresses specificity by asking for an anecdote or story in an attempt to get more precise descriptions rather than general opinion (Kvale, 1996). This question sometimes fell on blank faces when an interviewee could not think of a story, but sometimes elicited rich accounts of relationships. These questions also aim to elicit lack of engagement in relationships, in order to reveal if the consultant and client have little in common, or need no more than a passing connection, so one question was about what helped and hindered relationships, and specifically what challenges to relationships there were and how they were overcome.

Knowledgeability: rather than directly asking about knowledge, the questions are about learning from each other. The answers might indicate what adapting happened and what expertise was contributed. The questions elicit expertise, both of interviewee and of people that the interviewee knows. This gives some idea of what value has developed from relationships. How they use that knowledge gives some indication of the value of relationships.

Value: Value from relationships may be gained through learning and sharing meaning. Sharing meaning may provide valuable non-financial, un-measurable qualitative gain.

Building shared meanings requires negotiation of meaning and mutual participation. The answers might also indicate contribution of various parties, through building shared meanings, which is part of the cognitive dimension of social capital. Valuable relationships need not be client and consultant, but developer and user, perhaps, mediated by the outsider, i.e. the consultant, creating a value chain and including outcomes of the project, that is, the value realised by the organisation, and which include value for money.

The subheadings of the interview guide of background, relationships, knowledge and value acted as an agenda for the participant as well as a guide for the interviewer rather than as exact wording. Questions posed are shown at Appendix 6: interview guide on page 312. Interviews in this thesis were not regarded as examples of "truth" in the positivist perspective, but treated as occasions when participants constructed themselves in a particular way. The social and emotional atmosphere of each interview varied, although rapport was achieved overall. There were moments when a question to clarify understanding might have been interpreted by the participant as ignorance on the interviewee's part, and that caused the interviewer discomfort. Sometimes, knowing the researcher had a background in IT seemed to make an interviewee more comfortable. Interviews took place from November 2008 to January 2010 and are summarised in Table 3-2 with details of dates and timings in Appendix 8.5, Table 8-5 on page 310.

Table 3-2: summary of interviews undertaken

Role	Case Study
ISD CEO	A
e-services manager	A
Programme manager (contractor)	A
Consultancy CEO	A
Technical expert (contractor)	A
Project manager, (user & tester)	A
ISD BSM	A
Software developer (contractor)	A
Consultancy project manager	B
Licensing office(user & tester)	B

Role	Case Study
Customer services manager (user)	B
Director of Highways interviewed together with business systems manager	B
Director IT	C
IT user	C
IT support	C
IT manager	C
Supplier Account Director	D
IT delivery director	D
Supplier engagement lead	D
IT user director	D
Projects lead	D
SCRM	D
Procurement manager	E
Head EIS	E
IT architect	E
Manager Architecture	E
IT PM	E
User PM	E
SAP PM - local government	Not included in a case study
SAP manager - local government	Not included in a case study
Procurement manager – central government	Not included in a case study
Supplier relationship manager – central government	Not included in a case study
Consultant master teacher	Not included in a case study
Ex consultant	Not included in a case study
Consultant	Not included in a case study
Directors of IT firm	Not included in a case study
Directors of IT firm	Not included in a case study
CEO of IT firm	Not included in a case study
Consultant Head of Professional Development	Not included in a case study

Pilot interview

To test the interview schedule three pilot participants who had worked in a managerial capacity were recruited. Two were fellow students and the third was a personal contact. The pilot participants were an ex hospital administrator, a manager of a vineyard and an IT technical consultant. Although the aim of the pilot interviews was to test only the flow of

the questions, and the length of the interview, these interviews also gave a small sample of a spread of technical and managerial relationships. The researcher found the questions elicited relevant information about their experiences with other workers with whom they may have engaged. The participants confirmed the questions helped and encouraged them to talk. The timing was about right at just under 60 minutes except for the least talkative interviewee, where the interview was only around 20 minutes. The pilot and most of the case study interviews were recorded. When it was not possible to record interviews, contemporaneous notes were taken, or notes made as soon as possible after the interview.

The interview schedule was designed to give a defined though not rigid or prescriptive structure to encourage participants to continue talking. A review of the pilot interviews suggested the structure did encourage in-depth and rich description.

Transcription

The researcher transcribed the first interviews in case studies A and B, other interviews being transcribed professionally, with instructions that 'ums' and 'ers' did not need transcribing. The researcher entered the transcriptions into a software program, edited any interviews that a professional transcribed, reviewed the recording and completed any missing words and phrases, whilst annotating and before coding.

Having a professional transcribe some recordings might imply the researcher would miss something of the depth of the data, however, because it was necessary to review and analyse all transcripts, the researcher was still immersed in the data and gained the perspective of another listener as well.

The experience of transcription together with the use of a professional revealed this to be a skill that requires reflection because it is not possible to create an objective representation of the dialogue that had taken place because the researcher is so involved with the content (Tilley, 2003). Transcription requires constructing (Kvale, 1996, Kvale, 2007) something to model the conversation that took place. For example, it is not clear where to punctuate, or whether a remark was a query or a statement, drawing awareness to the differences between

oral and written language. Another issue about transcription is that not only are there differences in what people might hear from the recording, but the body language and actions such as sketching diagrams as people talked are missing.

To verify interviewee accounts required a number of actions. Verification of the individual interviews took place within the interview through checking understanding, and the interviewer repeating interviewee's words to check, and later following up through emails. On the subject matter of the project, verification came from the different interviewees expressing their own constructions. It was necessary to listen to what was said and how. In addition, during the interview it was necessary to watch and note hands and eyes because the movements add information that the recordings do not make.

> *"The live interview situation, with the interviewee's voice and facial and body expressions, provides a richer access to the subject's meanings than the transcribed texts will do later" (Kvale, 2007: 56)*

Hands are interesting. For example, a consultant pointed upwards at the vision he was describing. A manager moved his hands together from left, to right then to the middle to "form the middle ground". An interviewee waved meaning, "Switch off that recorder". Some movement gave information that was 'heard' but without words. Following Kvale's advice, the researcher made notes of this kind of information at the time and shortly after the interview.

Analysis of interviews

Kvale says there are five main approaches to the analysis of meaning: condensation, categorisation, narrative structuring, interpretation and ad hoc methods (Kvale, 1996: chapter 11). The researcher has used most of these methods. Interviewee statements have been condensed. Data has been categorised and thus reduced to tables and figures. Narrative structuring creates coherent stories, which is what the data analysis chapters provide, with speculative interpretation of interviewees' meaning, so a variety of methods have been used to analyse meaning.

One of Kvale's suggested steps for analysis is a re-interview but neither the participants nor the researcher were available for second interviews. Kvale (1996) suggests possibly extending the continuum of descriptions and interpretation to include action, by subjects beginning to act on new insights they have gained during the interview and one report fed back to a manager provided insights for future action. Some participants realised as they were interviewed that they were reflecting on their work.

There is danger of varying the questions' wording each time, which means that different answers will be obtained. However, it is sometimes better to keep rapport by varying the wording to respond to what the interviewee has said. It is tempting to move to the next question when an interviewee is not very talkative, asking leading questions, or confirming questions. The interview questions were broken up into four sections and these helped the interviewer by providing a natural flow to the interview. Those sections also formed an agenda for the discussions so participants that knew what to expect. See Interview Guide on page 312 of the appendices.

Data Analysis

Data analysis was an iterative process, the research process initially developing codes deduced from the theoretical literature, for example, knowledgeability, that allowed the creation of an initial template for analysis of engagement. Thematic content analysis, using NVivo software, to identify key themes was carried out on the transcribed interview recordings (Braun and Clarke, 2006, King, 2004, Miles and Huberman, 1994). Themes are features of participants' accounts that characterise particular perceptions or experiences that the researcher sees as relevant to the research question, and may indicate relationships and generalisations in the data.

The research approach was to treat the informants' answers as describing some external reality (Silverman, 2005: 154) and to ensure accuracy of interpretation, other informants' answers on the same issue were taken into account. The initial classification system related to the interview questions with themes for analysis from the proposed model of engagement,

shown in Figure 2-8. Each theme was coded with a label. Coding progressed iteratively though several phases. Interviews were also coded against general features of process, structure, climate, facts and queries (Miles and Huberman, 1994, Checkland, 1981). The deductive codes combined with the data that had been collected from cases were used to extend the template, the whole process being somewhat akin to that shown in Figure 3-1.

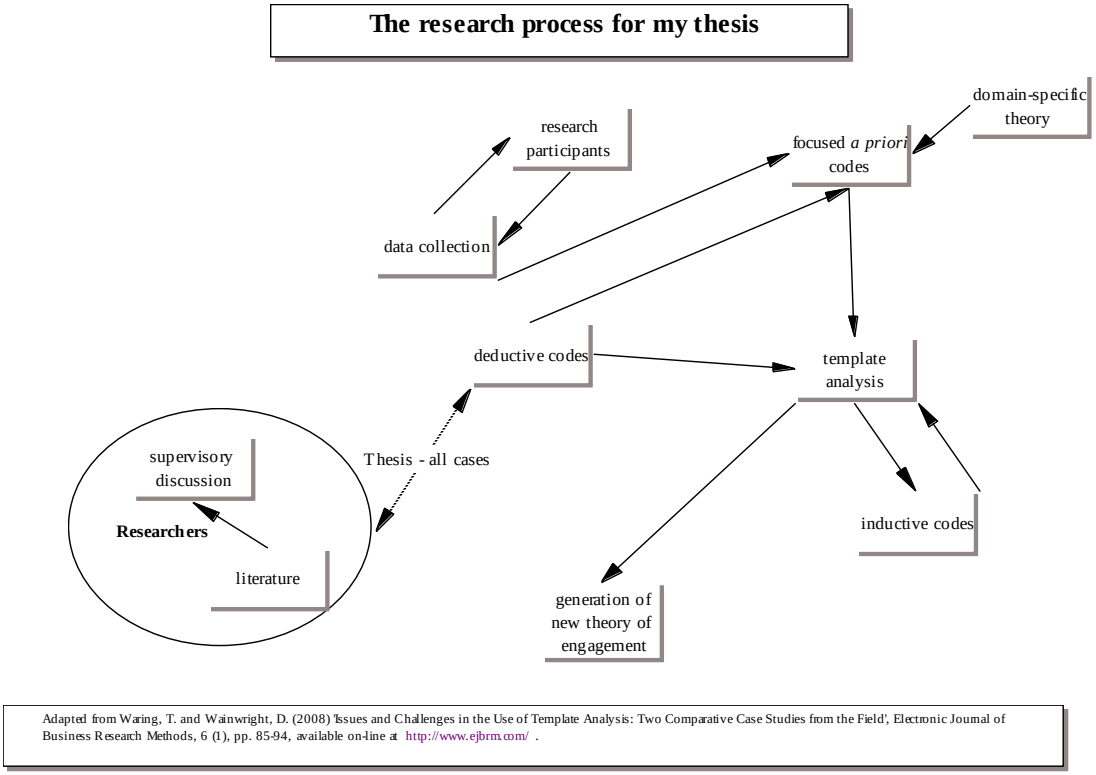


Figure 3-1: research process for thesis (Waring and Wainwright, 2008)

As aspects of engagement were realised as the framework developed, the coding structure was modified from the initial deductive coding and a more detailed tree structure of themes of engagement emerged. This activity created some free codes, such as metaphors and stories and some tree codes. A tree code for example might be environment that included place, time and boundary objects. Aspects that did not match existing codes became emerging themes. This approach led to template analysis, which requires development of a coding template that acts like a pattern. Such a pattern helps to organise and analyse qualitative data by themes, emphasising the use of hierarchical coding, such that themes are divided into sub-themes (King, 2004, King, 2008). Initial top-level themes for the

engagement template were conditions and emerging behaviours, and these in turn had sub-themes relating to communication, knowledgeability, and sharing, sense making and adapting. A list of coding nodes for engagement is set out at Table 3-3 below, showing how the various nodes branch off and extend, knowledgeability for instance having sub-nodes of expertise and contribution.

Table 3-3: engagement tree codes

Engagement		**36**	***170***				
Tree Node	**Conditions Of Engagement**		0	*0*			
	Tree Node	*Communication*		35	*438*		
		Tree Node	Participation	Yes	33	*420*	
		Tree Node	Environment	Yes	40	*255*	
			Tree Node	Time		14	*78*
			Tree Node	Place		15	*71*
			Tree Node	Boundary object		25	*107*
	Tree Node	*Knowledgeability*		37	*451*		
		Tree Node	Expertise		36	*478*	
		Tree Node	Contribution		38	*534*	
Tree Node	**Emerging Behaviours**		0	0			
	Tree Node	*Sense_making*		36	*415*		
		Tree Node	Cues		13	*32*	
		Tree Node	Plausibility		14	*45*	
		Tree Node	Enactment		16	*132*	
		Tree Node	Retrospect		18	*35*	
		Tree Node	Identity		18	*46*	
		Tree Node	SocialContact		20	*138*	
		Tree Node	OngoingEvents		20	*97*	
	Tree Node	*Sharing*	Yes	38	*503*		
		Tree Node	Power		18	*56*	
		Tree Node	Risk		18	*34*	
	Tree Node	*Adapting*	Yes	39	*296*		

Analysis started as soon as data was obtained, and then continued iteratively as cases were written, so writing formed part of the analysis (Richardson, 2005). Behaviours and conditions were coded. An example that coded as sharing was,

> *"the idea of setting up mixed teams is that it's extremely important to get that balance right because nobody then has this overarching we own everything" [case A]*

An example that coded as sense making was:

> *"I will bring it to his attention. And he does something similar" [case D]*

An example that coded as expertise was:

> *"Leadership. It's the ability to say stop, you know, stop and let's just stand back and take stock of the situation, recognise what's good and bad, courage to have very open and honest, forthright discussions" [case D]*

Recognising that there was some kind of interaction between them, the researcher aimed to identify behaviours and conditions that were similarly coded. To infer an interaction, the researcher examined data that was assigned to two categories, and considered whether the connection expressed an interaction (Dey, 1993: 188), that is, by matching data coded at each end of the connection, for example sharing and sense making. This was done using the Nvivo query facility to search for a combination of codes, and a list of such queries is at Appendix 8.13 with an example of the criteria for a search for data coded with both sharing and sense making being shown in Figure 3-2.

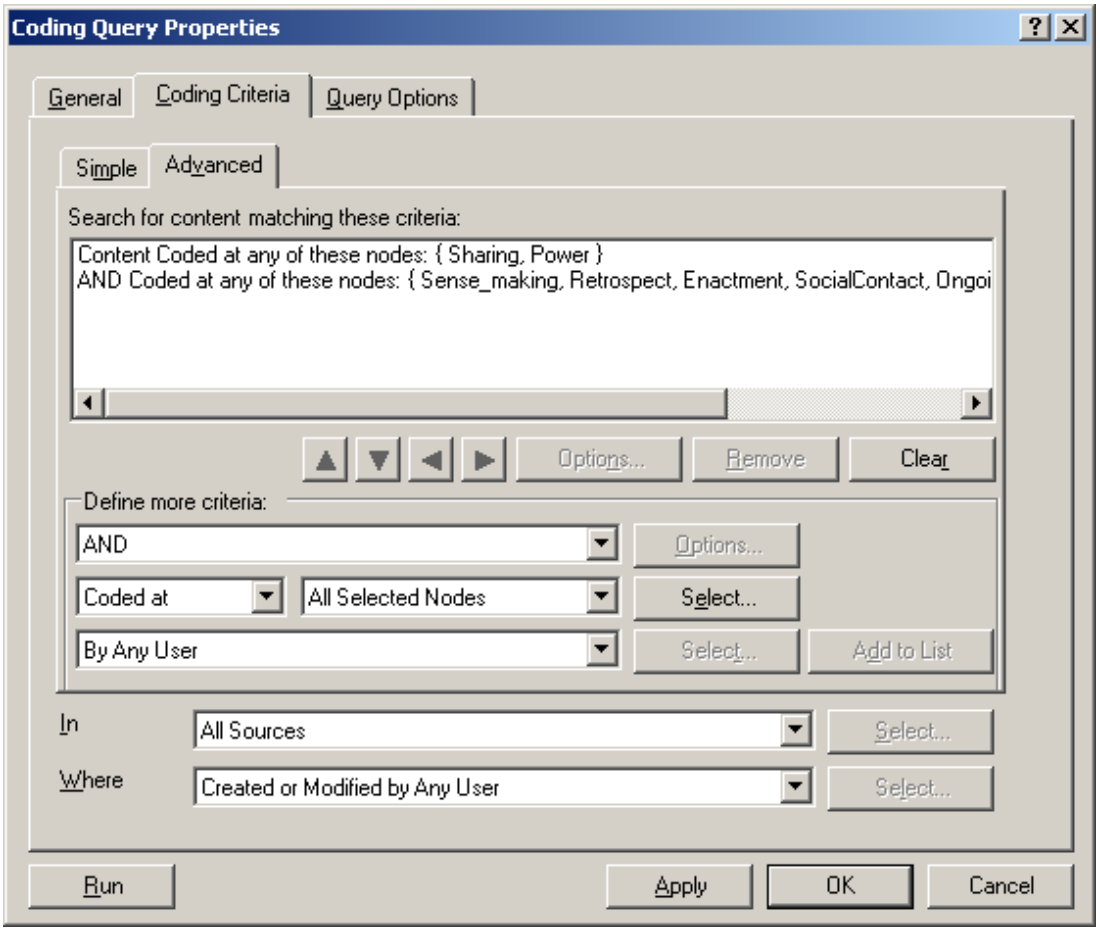


Figure 3-2: example of a coding query

This query searched two tree nodes and their sub nodes for data coded with matching content in all the sources. For example, it identified the following quote as coded with both sharing and sense making.

> *"It was reasonably frequent, where we could give some feedback and suggestions about how he steered, and what he was doing" [case E]*

The results were examined and considered with the aim of identifying meaningful combinations of behaviours and conditions, to allow the researcher to consider and explore interactions between them. These interactions were diagrammatically depicted for each case study with arrows between behaviours or conditions, and thicker lines used where evidence suggested stronger interactions. The figures are shown for each case in chapter 5.

The researcher used qualitative data analysis software (QDAS) because of its useful linking mechanisms, annotations and memos (Di Gregorio, 2008). Whilst transcribing or listening the first time to a transcription the software allowed annotations as the transcription or recording drew attention to themes or points of interest. Memos linked collections of notes on facets of engagement, with comments on how they matched the research framework.

3.4 Other data sources

Other data sources included project documentation such as project initiation documents (PIDs), closing documents, reports that were produced as part of the project, contractual documentation, presentation slides created for the project. Emails were kept and imported to the NVivo database for coding. Some photographs were taken to illustrate the layout of spaces used on the projects. Notes were made on visiting premises, and one meeting between clients and suppliers was observed and notes taken, together with the documentation provided for that meeting. The data sources were typed as web, email, document, transcript, notes, photo or contact summary forms (Miles and Huberman, 1994). All sources are listed in the appendix at Table 8-8 on page 324.

3.5 Validity

"Validity is concerned with the integrity of the conclusions that are generated from ... research" (Bryman, 1988: 41), and pertains to "whether a method investigates what it purports to investigate" (Kvale, 2007: 122).

Internal validity is of concern for causal case studies (Yin, 2003: 36) and would apply to research that attempted to show causal relationships between conditions and behaviours. Although inapplicable to exploratory research such as this, nevertheless, concern with internal validity extends to making inferences, because behaviours cannot be observed from interviews or documentary evidence. To address this issue from a relativist viewpoint, the research has included perspectives from several case study organisations, and from several interviewees on each case. From a constructionist viewpoint, the researcher has gained access to the experiences of those in the setting of public sector IT projects to use those peoples' own interpretation of relationships, conditions and engaged behaviours (Easterby-Smith et al., 2002: 53).

External validity concerns whether the findings can be generalised beyond the case studies. Qualitative research relies on analytical (Yin, 2003: 37) rather than statistical generalisation. The findings from these case studies may be generalised to an empirically grounded model of engagement.

Kvale (2007) describes two forms of validity pertinent to doing interviews: communicative validity and pragmatic validity. Communicative validity involves treating the interview as a conversation, with follow up questions to improve the interviewer's understanding of the interviewee's experience of engagement. Pragmatic validity relates interviewee responses to interpretation available from other sources such as other participants' corroborating evidence on the same IT project or documents as shown in Table 8-8 on page 324. It is important to question the validity of asking only consultants to assess engagement on IT projects; this thesis focuses on clients as well as on consultants.

3.6 The researcher and ethical issues

Stake wrote:

> *"Qualitative researchers are guests in the private spaces of the world. Their manners should be good and their code of ethics strict" (Stake, 2005: 459)*

The researcher's first aim was to avoid causing harm to any person or the organisation involved. With the aim of not causing harm to anyone, the researcher gained informed consent from interviewees, first by providing the gatekeeper to the case with a summary of research requirements and methodology, and secondly, by providing each interviewee with information on the research, and a consent form. This consent form also requested permission to audio record interviews. The ESRC guidance on ethics was followed (ESRC, 2010) by submitting a proposal to the university ethics approval committee before proceeding with the research. The university approval was received. Appendices include:

summary of research requirements and methodology, shown at Appendix 8: research requirements and methodology on page 315;

information on the research, shown at Appendix 9: research study information sheet on page 316;

university approval, shown at Appendix 10: ethics approval on page 318;

consent form, shown at Appendix 11: consent form on page 319

Interviewees and organisations were informed of the nature of the research and given the right to anonymity, offered the chance to withdraw or discontinue participation, given written details of how their details would be stored and used and asked to indicate their agreement. At the interview, interviewees were sent or given a copy of the information sheet and an informed consent form. The form was discussed and collected at the beginning of the interview, and gave the option of separately giving or refusing permission for the recording of interview. Interviewees did not always share the same understanding as the interviewer about the use of the data generated through the interview. One remarked that she did not expect a researcher to use an interviewee's exact words, but just collect general

background information from her, so because of that understanding, her words have been reported, not quoted.

Talking about relationships in a project constructs a perception of the relationships in both interviewer and interviewee. The researcher cannot avoid talking about relationships because that is what the focus of the research. Consequently, questions may change the participant's self-concept and the researcher must be aware of the ethics of '*do no harm'*.

During analysis and case write-ups, interviewees were given anonymity by the use of pseudonyms. Within the thesis, organisations and individuals are anonymised, referred to either by role or pseudonyms. The original data is securely stored, and the NVivo database is password protected.

3.7 Summary of research design

This chapter has presented the philosophical position underpinning this study and the design that guides the empirical work. The critical realist perspective adopted for this research was explained. The methods of data collection have been discussed. The research was carried out through multiple instrumental case studies that entailed visits and interviews with key informants. The unit of analysis for this research is the IT project or programme, with five case studies included, a programme being conceived as a "combination of projects and other activities" so is of greater scope and complexity than a project (Pellegrinelli, 2008: 3).

The face-to-face interview was the main source of data collection, which was subject to coding and thematic template analysis. NVivo software was used to aid this qualitative analysis. Aspects of the research design are summarised in Table 3-4.

Table 3-4: research design summary table

Research design	Explanation
Aims of the thesis	The aim is to understand how public sector clients engage with their external consultants on IT projects.
Philosophy: ontology and epistemology	This thesis adopts relativist ontology but its epistemology is based on constructivism, taking a critical realist stance.
Research questions	What behaviours are required for engagement?

Research design	Explanation
	Which conditions are important for producing engaged behaviours? How do conditions and behaviours interact? What kind of value results from engagement and how is it produced?
Methodology	Multiple instrumental case studies
Unit of analysis	The IT project or programme
Methods of data collection	Interviews, observation, documents, photos
Analytical strategy	Abductive analysis using techniques of case description, in-case and cross-case analysis, coding, thematic and template analysis

3.8 Presentation of the data chapters

The empirical data of this research project will be examined in the next three chapters.

The first data chapter, chapter 4, reports the systematic observations of each case study and describes the projects' settings. The content and structure of the second data chapter, chapter 5, is directed by an *a priori* coding of the interview texts starting from the themes identified in the literature reviews of Chapter 2 and incorporated into the conceptual framework shown in Figure 2-8. The following data chapter, chapter 6, analyses across cases in order to confirm key issues and emerging behaviours from the research, before conclusions are drawn in the final chapter.

4 Case settings

4.1 Introduction

This chapter gives the basic factual background to the five case studies. It describes the programme or project of each case, lists the interviewees, then the key parties and the outcome. Key parties are those groups of participants in the project known to be significant to the success of the project outcome, not necessarily interviewed. These five case studies have common contexts of public sector and information technology. Two are short consultancy projects and three cases concern systems development.

Each case study has three key parties: external professionals whether they be suppliers or consultants, the internal information systems department (ISD) and the end users of the information system. These key parties are representative of functional or organisational divisions, not individuals, although each key party includes individuals some of whom, (not all) are project participants. For instance, an ISD will have several people, only some of whom are working on the project being researched.

4.2 Case A: Overall characteristics

This case is an on-going IT programme of projects undertaken by the government of a small island with consultancy support that mediates between government business departments and their centralised Information Systems Department (ISD). The programme also uses external contractors on a long-term basis to develop software.

4.2.1 Programme description

The programme is a collection of projects, all at different phases, whose purpose is to join up government on-line (JUGol) services by making available a common user interface for a number of IT services, thus providing service users with an ability to look at government as one entity. Each project phase involved government employees, a number of contractors

with specialist IT skills, who came from three different suppliers, and a single consultancy firm.

The consultancy brief was to help ISD understand how, cost effectively, to move forward to being an efficient user of IT, to drive business change, to bring a framework and thinking to deliver change. The consultancy included at least two consultants working with ISD, one of whom was CEO of the consultancy. The consultancy CEO worked closely with and took briefings from ISD senior management

4.2.2 Key parties

As outlined above, key parties came from several organisations: a consultancy, suppliers of contractors and the government. Key parties in the government came from ISD and other business departments.

Other government departments who were responsible for the services that were being put online with the new single interface also interacted with ISD. Each project within the programme had a business sponsor and a business team.

4.2.3 Interviewees

The following individuals were interviewed as shown in Table 4-1,

Table 4-1: interviewees case A

Role	Client / consultant	Which organisation	Acronym
CEO	Consultant	Consultancy	
Director	Client	Information Systems Department	ISD CEO
e-services manager	Client	Information Systems Department	e-SM
Tester & project manager	Client	Information Systems Department	TPM
ISD business systems manager	Client	Information Systems Department	ISD BSM
Developer	Client / contractor	Contractor in ISD (agency 1)	
Technical expert	Client / contractor	Contractor in ISD (agency 2)	
Programme manager	Client / contractor	Contractor in ISD (agency 3)	JUGol PM
Director of management	Client	Transport department	DoMS

Role	Client / consultant	Which organisation	Acronym
services			
Business systems manager	Client	Transport department	BSM

Discussions with the ISD business systems manager and the CEO of ISD were unrecorded. Other data was available and included emails, web pages, documents and photos. Sources are at Appendix 14: sources on page 324.

The ISD CEO who allowed access to this and case study B asked his people if they were interested in helping the research. It is understood that they volunteered to meet and talk with the researcher. They are representative of the key parties, being public servants and external suppliers of services, such as contractors and consultants. Where permission was given, discussions were recorded. Field notes were made for those instances where permission to record was not sought or not given.

In Table 4-1, three entries show client / contractor. This is because three participants are in dual roles, being contracted as external professional providers of a service to the information systems department and thus also clients of the consultancy.

4.2.4 Programme outcome

The programme does not have an anticipated finish date, so is not bounded in time, although the underlying projects are. Major decisions and deliverables are signed up to over a year ahead. No evidence of any project having major problems was found, and participants talked of effective projects being implemented.

4.3 Case B: Overall characteristics

This case was an IT project undertaken by the transport department of the government of the same small island as case A. The client used external consultants from the island to manage the project process and contractors from a different agency in another country to develop the software.

4.3.1 Project description

The purpose of the project was to replace an existing licensing system that provided and recorded vehicle licenses.

4.3.2 Key parties

Key parties needed to complete the project came from several organisations: the same consultancy as in case A, a supplier of software development and government. The consultancy provided a project manager and its CEO gave strategic advice. Two project managers from the consultancy had worked on this project. The original project manager had identified project objectives and the second project manager managed the development of the project. An overseas software house based in Eastern Europe supplied software developers. Within government, key parties came from at least three departments: the government IS department (ISD), the transport department and government departments that used the licensing system, including the Post Office, customs, police and tax. ISD provided technical advice and support on systems procurement and governance. Government user departments participated in the governance of the project and its management and provided testers who had extensive experience as users of the previous system.

4.3.3 Interviewees

Interviewees, who volunteered to meet the researcher, were representative of the licensing system users and the consultancy. The software developers were not available to interview because based in another country. The schedule originally was to have around an hour with each interviewee, but that changed when the customer services manager was late arriving from a previous appointment. However, in the meantime, the licensing officer stepped in

and offered to provide information; so instead of one one-hour interview, there were two half-hour interviews. The interview with the director of management services took place with the business systems manager, and started late, which meant a full hour of discussion was not possible.

The following people were interviewed.

Table 4-2: interviewees case B

Role	Client / consultant	Which part of the organisation	Acronym
CEO	Client	ISD	ISD CEO
Project manager	Consultant	Consultancy	Consultancy PM
Director of management services	Client	Transport department	DMS
Business systems manager	Client	Transport department	BSM
Licensing officer and user	Client	Transport department	LO
Customer services manager	Client	Transport department	CSM
CEO	Consultant	Consultancy	Consultancy CEO

The discussions with the CEO of ISD were unrecorded. Some of the interviewees for this case study were also participants in case study A including the ISD CEO and the CEO of the consultancy. Other data available included documents, emails and photos. Sources are tabulated at Table 8-8 at page 324.

4.3.4 Project outcome

The project started at a specific date and completed in November 2008, under budget and slightly over time. It achieved most of the objectives that were in the initial scoping exercise; a second project was then set up to complete unachieved objectives.

4.4 Case C: Overall characteristics

This case was a short and simple piece of consultancy work for the information systems department of a local council, where the client needed an outsider with interviewing skills, knowledge of information systems in a council context and an independent perspective.

4.4.1 Project description

The purpose of the project was to identify technology options for selecting a replacement IT supplier. It involved a single consultant from a respected specialist IT organisation, whose task was to appraise current and alternative suppliers of an IT system. The incumbent supplier had been in place for eight years and had its contract coming up for renewal in 2010. There were some grumbles about existing provision. For example, the existing system was "*clunky*," customer service was occasionally lacking and the incumbent supplier seemed expensive. The IT manager wanted to know her options and needed an independent report from a respected consultant.

The consultant's brief was to define the client's needs and requirements, the client being the council. The consultant had to discover users' needs, and identify how well the incumbent supplier met them. She had also to find out the cost of meeting those needs and review the market identifying the main competitors in enough detail to get prices and solutions that could be used for comparison. Thirty days over three months and a budget of £27,000 were allowed.

4.4.2 Key parties

The key parties in the council came from the social services department, the IS department (ISD) and from the finance department, all of whom had some stake in the project.

The information systems department had to provide human resources with technical skills to maintain the system.

The council service had to provide its end users with social services and offer new ways of using the service.

The finance department had to account for the money spent or saved.

The consultant interviewed a range of stakeholders from the service, from ISD and from finance, asking for their feedback on requirements and on the documents. She also spoke with the incumbent supplier.

4.4.3 Interviewees

Interviewees were representative of the ISD and the council service. The following three individuals involved in the project were interviewed.

Table 4-3: interviewees case C

Role	Client or consultant	Which part of the organisation
IT manager	Client	ISD
IT support	Client	ISD
IT user	Client	Service

The IT manager refused permission for the researcher to contact the consultant, but other data was available including project document from the council, and web searches that revealed:

Career profiles of consultant, and some other participants in the project

Other council documentation

Discussion documents and reports on social services

4.4.4 Project outcome

The project finished to time and budget, providing the information that the IT manager required to make a business case. She used the information to go back to the incumbent supplier and negotiate a large reduction in fees. The reduction was worth ten times more than the cost of the consultancy project, saving over £200,000 in costs on the future project so the IT manager deemed the project financially worthwhile.

4.5 Case D: Overall characteristics

Although it took much effort over some months to gain access to this case, there were several people available to interview, and it was a big programme, so the case is richer than case C. The context was a failing information systems programme in a central government department, a programme that through collaborative effort turned into a major success. Hence, its participants were proud of their work and wanted to talk about it. Although the programme involved two IT supplier organisations, the focus of this case study is on client relationships with one supplier.

4.5.1 Programme description

The programme was a shared business service (SBS), started in 2007 to enhance functionality and improve productivity of an existing e-business solution. The SBS programme client is part of a central government office that manages the programme on behalf of a government customer who uses the information system to run government business. This customer provides the biggest service of this government office and the majority of employees in this government office work for this particular service.

There were two suppliers: one (X) was responsible for functional enhancements and the other (Y) managed the system. The two suppliers worked closely together to provide services that include desktop maintenance, application hosting, and network services and infrastructure. For this case study, the researcher had access only to supplier X.

Supplier X of the shared business service is a leading provider of IT systems, services and products in the UK, employing over 10,000 people. The services include consulting, applications, systems integration, managed services and product solutions in public and private sector. The supplier had had a long-term contract over several years to provide hardware and technical support to the government department, due for renewal in 2009, a few weeks before the researcher had access to interview data.

To preserve anonymity and confidentiality the details of the business are not described. Access to internal documents was possible only if they were not protectively marked. Consequently, data about the programme has been obtained either from publicly available information or verbally from interviewees, with assurances of confidentiality.

The government department did not manage contracts after procurement, but left them to the accounts function. Neither was there any policy of enduring relationships. When this programme went out of control by mid 2008 with uncertainty on cost and delivery, a new client group commercial director (GCD) with responsibility for transforming how the Department managed its expenditure on goods and services, challenged X to turn the situation around and expand its role by becoming a strategic partner to the government department.

4.5.2 Key parties

Key parties came from the procuring government IS department, the government customer (around 24,000 users) and two suppliers. This is a complex mixture of parties within the government office, its various departments and the suppliers. This project is

> *"a complicated landscape in terms of stakeholder management and who's responsible over delivery" [IT delivery director].*

The theme of which key party was responsible for delivery pervaded the case study.

This study concentrates on the relationship with one of the suppliers, who had over 500 employees working on a number of different programmes within the government department with, at its peak, about 35 people on the SBS project. Other programmes came into focus during the research and influenced participants' responses.

4.5.3 Interviewees

Interviewees were representative of the supplier, the government customer and government ISD. The following individuals shown in Table 4-4 were interviewed.

Table 4-4: interviewees case D

Role	Client / consultant	Which organisation	Acronym
IT delivery director, project director on several project	Client	Government office ISD	ITDD
IT category manager, deputy director for major projects and strategic procurements, who acts as projects leader and supplier-customer relationship manager	Client	Government office ISD	ITCM
Senior commercial manager	Client	Government office ISD	SCM
IT user director	Client	Government office customer	IT UD
Supplier engagement lead	Consultant	Supplier X	S-EL
Account director	Consultant	Supplier X	S-AD
Discussion was not recorded, just noted, I do not know his role, just that he was at the observed meeting and we talked a couple of times in the lobby.	Consultant	Supplier X	

Most of the discussions were recorded and transcribed, with the exception of a couple of discussions with a consultant. This consultant was at the observed meeting, but was originally met by chance when waiting for security clearance in the lobby, and through chatting identified a common interest. Consequently, it was possible to chat another time equally informally, a use of liminality (Sturdy et al., 2006). Some data was obtained through non-participant observation sitting in on a progress meeting. See Appendix 14: sources in Table 8-8 at page 324.

4.5.4 Programme outcome

The SBS programme started in 2007 and completed in early 2009. It achieved a phased timetable for three releases and the Office of Government Commerce (OGC) recognised it as having been successfully delivered. SBS was a £30m project, but its successful delivery led to a £330m contract for supplier X, and the government department will save 25% of its IT spending because of that deal.

The benefits of the project came from upgrading an Enterprise Resource Planning system to a shared service, whose benefits included cost savings of £40-50 million, and implemented part of the UK government's ICT strategy for transformational government (CIO, 2006).

4.6 Case E: Overall characteristics

This case was a short piece of consultancy work for an order fulfilment systems analysis that informed and fed into a larger IT project undertaken by the information systems department (ISD) of a large non-departmental public body (NDPB). A consultant was used for his analysis skills and information system knowledge.

4.6.1 Project description

The NDPB is a national organisation that stores, and catalogues items on behalf of the nation. The public can order copies of these items, which means that the NDPB requires an efficient order management system. A large project will rationalise the NDPB's legacy systems through a new ordering and fulfilment system (OFS), but first the NDPB needed to understand what its existing many and varied systems did, and which parts of its organisation used them. For historical reasons the organisation had had six directorates each of which had its own computer department and separate systems. More recently, a central computer department was established, but the separate systems continued in operation. The collections are organised by different types of content, although the same activities are required, such as preserving, cataloguing and thus duplicating. However, different departments had different ways of doing things, including some in-house and some out-sourced. Finally, the categories of customers and the relationships between services and customer segments were unknown.

Therefore, the NDPB had systems that it wanted to rationalise, and its information systems department (ISD) had technical aims, such as removing ageing systems that were complicated and expensive to support and maintain. The business directorates were not concerned about the technicalities, but wanted efficiency and better data, and although all the departments were working to the same goals, it did not always appear that way.

The NDPB put a contract out for tender with two objectives. The first was to analyse the NDPB's provision of services. The second objective was to produce a future view of the

business services. The results of the project were to provide a technical background to validate the requirements of a larger project and to help spot gaps and duplications.

After a competitive exercise between three invited consultancies that were already on a framework agreement, one consultancy was chosen and one consultant from that consultancy was given the brief to do the work. Twenty days over three months and a budget of £30,000 were allowed.

4.6.2 Key parties

Key client parties came from the Information Systems Department (ISD) of the NDPB and other directorates, as shown in Figure 4-1.

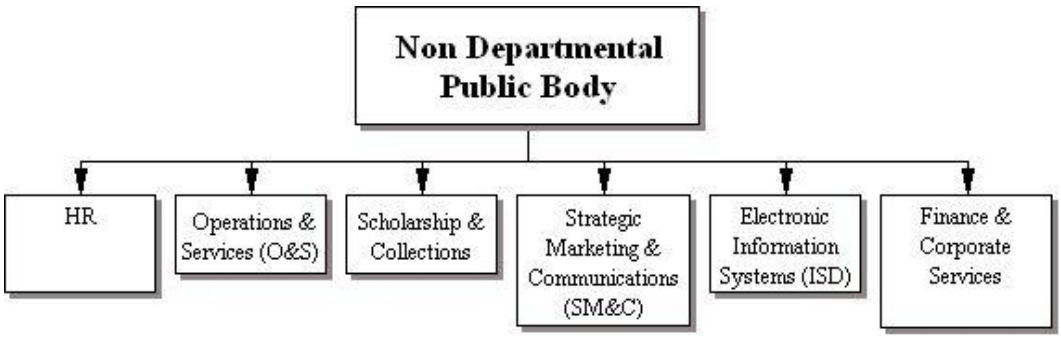


Figure 4-1: divisional structure case E

At the main site, there are around 800 or 900 permanent staff, very few of whom are under 25, and many of whom have been employed at the NDPB for many years.

Participants included the ISD head, the manager of the ISD architecture group, the ISD IT project manager and a procurement officer who coordinates contracts. To gain the information required, the consultant spoke to around ten key people in various directorates and who had been there for many years. These included users, heads of departments and technical people from various directorates. The consultant worked particularly closely with the manager of the ISD architecture group, the ISD project manager and the head of ISD.

Another key party to the project was the procurement side, which sets up procurement contracts for suppliers including consultancy work such as this. Procurement is important to the people in this case study, so important that even though the procurement officer had had

no working relationship with the consultant, the gatekeeper to this case study assumed it was necessary for the researcher to meet and talk with the procurement officer. The procurement officer supports a legacy systems programme that had some spare budget from an existing framework contract. Some of that framework budget was spent on this particular consultancy study. See appendix for description of frameworks. The procurement process is relevant because it influences the start of a relationship.

The terms of reference that were part of the tender process formed a brief of what the project involved and that was put out to the relevant three companies, who came back with possible costs, CVs of people who would be involved, and proposals for delivery start dates and expectations. The NDPB then used telephone interviews to check skills, and awarded the contract. Concurrently with this, the NDPB started a procurement process for a major contract for the delivery of new capability. The output of this smaller project helped understanding business requirements and crosschecked needs that fed into a later stage of the major contract.

4.6.3 Interviewees

The individuals involved in the project who were interviewed are shown in Table 4-5 Most of the interviewees were representative of ISD. However, one interviewee, although technical, was a user of ISD services, and had helped the consultant find information. Most of the discussions were recorded and transcribed. One interview was not recorded but notes made and checked with the interviewee, the user technical project manager.

Table 4-5: interviewees case E

Role	Client / consultant	Which part of the organisation	Acronym
ISD IT Project manager	Client	Information systems department (ISD)	ISD PM
Procurement manager and contract coordinator	Client	ISD	PCM
Head of architecture and development in the ISD directorate and project sponsor	Client	ISD	ISD Head

Role	Client / consultant	Which part of the organisation	Acronym
Manager of architecture group and lead ISD architect whose role is to manage the ISD architecture and to lead the team that provides technical architecture expertise, responsible for managing architectural input, and the applications that support the whole of the NDPB in its day to day business	Client	ISD	AM
User Technical Project Manager for the development of remote services systems in the document supply centre (DSC)	Client	ISD	Supply PM
IT systems and business analyst	Consultant		IT C

Other data was available through web searches that revealed:

Career profiles of interviewees and other participants in the project

Tender and framework documentation

Discussion documents and reports on the bigger project

Structure of the NDPB

Sources are tabulated at Table 8-8 on page 324.

4.6.4 Project outcome

The project was completed to time and to budget in spring 2009. The information on existing systems was needed in order to express requirements for new system development. The project output, a report that identifies 8 customer segments and 45 services, informed the subsequent contract for over £2 million that was signed in 2010 to create an ordering service that will integrate the disparate systems.

4.7 Summary

This chapter has outlined the five case studies that were undertaken to explore empirically the framework shown in Figure 2-8 this research. These included two cases where the project required a single consultant, brought in for advice. Three other cases required software development and involved contractors, and suppliers or consultants. Two of these three cases were programmes of development, and one was a project. The next chapter will analyse each case study in detail according to the components of the research framework.

5 Within case analysis

5.1 Introduction

This chapter analyses within case using the initial conceptual model that was developed from the literature. It analyses engaged behaviour between participants examining components of environment, participants and expertise with a particular interest in cross-boundary engagement between clients and external participants. External participants in these case studies provide IT expertise in areas such as IT strategy or software development, as described in Chapter 4. They may be consultants, contractors or suppliers.

This is a long chapter because it analyses each of the five cases separately.

5.2 Case A: discussion

This section discusses the programme of projects to provide public on-line services for an island government.

The next section analyses environment and participants in case A.

5.2.1 Environment

This section analyses environment by place, artefacts and time.

Place

The development team was on one physical site. Teams shared a big open-plan office on one floor, although they had started on a separate and quieter floor, which team members appreciated:

> *We actually sat at the back of the second floor when printing services were at the front and completely sort of tatty carpet, shoddy desks and everything, but it was really good because we were the team together. [..] The core of the development team were together, and I think that helps [...]. Eight or so desks and we got to know each other more personally as well because you were able to [talk about] what were you up to at the weekend and things like that which now you've built those relationships at least you can ask [the technical expert] how his son is doing and everything. But, I think if we'd been that bit more fragmented in the big room [] we might not have gelled as quickly and so well. [TPM]*

One developer was a young man who was reputed to be shy. He admitted that on a previous contract, "*it would be always a bit of an inconvenience to talk with clients,"* but here he found this environment helped him to build relationships with people.

> *Here I can just walk over and talk to [the programmer manager] there and then you can have a five-minute meeting. You don't need to make it into a big formal thing.*

Formal and informal meetings were face-to-face. Senior managers held regular formal meetings and the consultant met weekly with the ISD CEO.

Artefacts

Artefacts in the environment were shared documents that included the procurement framework, a project guide, progress reports and a programme plan.

A procurement framework is an aspect of a government environment, because there are financial directives to comply with for spending public money. Procurement is important for the client-consultant relationship because it governs the initial start of a project, and includes formal and legal requirements on parties to a project. However, at the initial stage of the research, it was not clear how procurement influenced engagement.

Participants in all case studies mentioned procurement to a greater or lesser extent. In this case, it was suggested that in attempts to be transparent, inefficient ways of buying may result when going out to tender for suppliers or contractors. For example,

> *"if you imagine for every piece of work, if you have to go out to open tender for that then that takes a lot of time from government, costs our suppliers money which they then charge on to us so all ways round that's inefficient." [Consultancy CEO]*

ISD wanted efficient ways of buying from suppliers but still be able to argue that the processes were open and that value for money had been obtained, so the department set up a procurement framework. The ISD CEO and consultancy CEO between them put together the procurement framework at a strategic level. The framework also allowed ISD to consider their values, whether they wanted to employ suppliers from the Island, the UK or Europe.

> *We need to prioritise and spend locally because we're a local economy and we need to have a level of self-sufficiency. [CEO consultancy]*

The procurement framework allowed that choice and self-sufficiency.

Another reason for the procurement framework was that ISD required a mixed team whose members worked well together. The balance between civil servants and contractors from different agencies meant that nobody had overall control. The framework agreement involved all the suppliers in the vision and outcomes that the CEO was aiming at over the next ten years. Therefore, ISD set up procurements that were intended to benefit both the commercial partner and the government. Such contracts thus also changed the relationship to one more integrated with ISD.

> *They were contracts that would give the commercial organisations a reason to give us good terms. It's a long term relation, but also one which would give us the*

> *opportunity to have an open dialogue with them and what I mean by that is if they don't perform they're out. [Consultancy CEO]*

The project guide explained the required methodology and governance for any project.

ISD team members had jointly developed a public document that was a progress report on changing government information systems, written to demonstrate the ISD contribution to a government level strategic plan. Its production also demonstrated teamwork and the CEO admitted to pleasure and pride at seeing team members producing it with very little input from him.

The programme plan was available to all ISD members, and kept on the wall of almost every meeting room, as well as the wall of the ISD business systems manager, whose job it was to keep it up to date. . The programme plan, shown in Figure 5-1 on page 113 helped to coordinate the various projects and resources that made up the programme.

Finally, there was an electronic artefact. The development team used a Microsoft product, SharePoint, which is an electronic server for holding and sharing organisation resources. It is advertised as "facilitating information sharing across boundaries" (Microsoft, 2010). The team used it for workflow and release procedures.

Hindrances in the environment were mainly noise and distractions within the open-plan office. On occasions when teleconferencing was required then there were difficulties hearing because of the general murmur of noise in the big office.

Time

Being a programme, this was not a time bound single project, but there were several projects all with their own time scales. The programme plan was an artefact that helped participants to plan their time and resources to match the intended milestones.

Figure 5-1: programme plan

5.2.2 Participation

Governance

It is necessary to explore the governance structure because the power relations in a project (Mohe, 2005, Pryke, 2005, Sturdy, 1997a) might affect engagement. Governance expertise allows the control and coordination of consulting projects (Mohe, 2005) and in the public sector, an assessment of client-contractor relationships as they develop during the project (NAO, 2006f). The governance structure in this case study and case study B has two tiers; the higher one that is the business change steering group, at central government and legislative level, coordinates strategy and has members drawn from ISD, other government departments and politicians. It is shown in Figure 5-2.

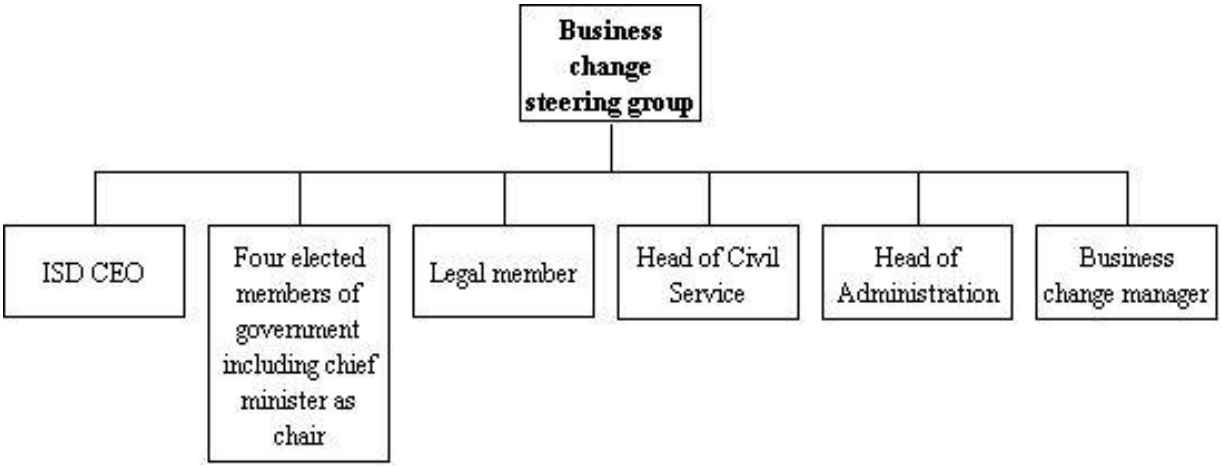


Figure 5-2: governance through business change steering group - case A

The ISD parties included the project office, technology assurance group (TAG), project review board, and production services. These parties formed a project review board, shown at Figure 5-3 that oversaw the technical approval, processing and development of projects.

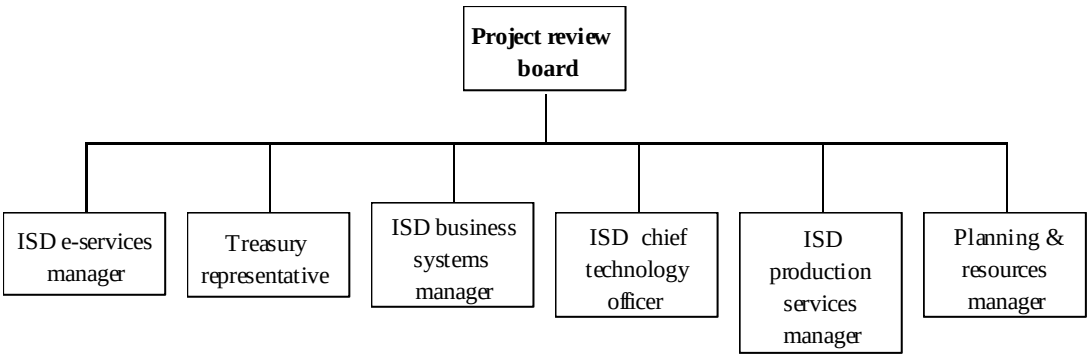


Figure 5-3: governance through project review board – case A

The business systems manager, who was the head of programmes, sat on the project review board and was a member of the senior management team, so met regularly with the consultancy CEO.

Participants

Chapter 4 indicated the key parties to this programme. Participants in this case study may be categorised as business, ISD and external. Figure 5-4 shows the participants to the programme.

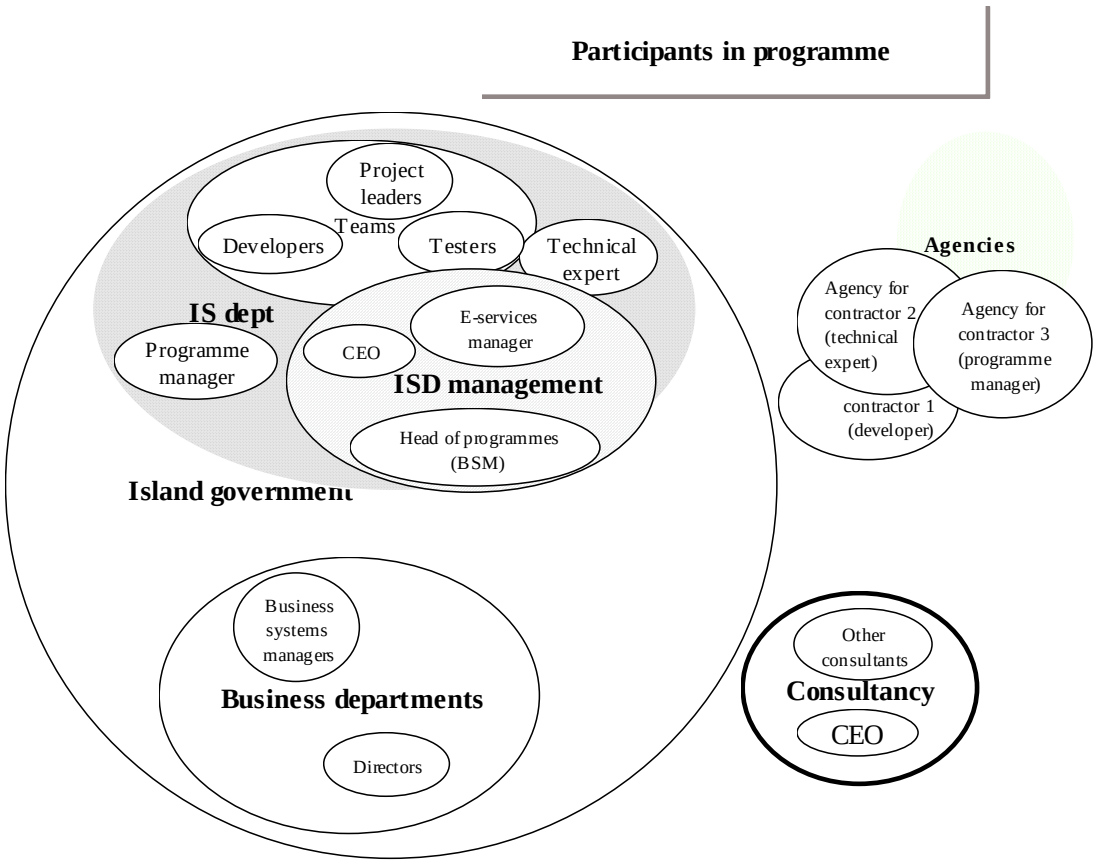


Figure 5-4: participants in case A

Business participants

The business participants were internal clients of ISD, who itself was a client of the consultancy. A problem of participation is that government departments behave as silos, protecting their data and ISD does not have the mandate to tell departments to share data. Another problem is getting the departments to come to ISD expressing their requirements, and having got people participating to be sure that the right participants come with the right level of expertise and authority. The consultancy CEO illustrated problems of participation existed in some parts of government. He had a good relationship with the CEO of a government department:

> *A very good relationship and she was actually very important in terms of change. She was part of the problem just because of the way she was [...], because she was visionary and she hadn't built the right team around her she was struggling.*

The story implies that managers with the right skills choose the right participants. The consultancy CEO relates another story where two senior managers were resisting a strategic

change, and until the department's CEO removed them, the project could not move on. What is interesting about this change of participants is that the discussion to solve the problem occurred in an informal place at an informal time, which relates back to the earlier discussion of environment, thus illustrating that components of communication interlink.

ISD participants

ISD management formed the client. The ISD CEO had come to the office around five years earlier and finding the IS department without an approach that supported overall business strategy and government objectives, commissioned the consultancy. The ISD CEO briefed the consultancy CEO and held regular discussions on strategy, and development of systems to support overall business aims.

Working across silos

The ISD department has a potentially strategic role in creating and maintaining business information systems to support government strategy so, for example when student support requests are raised there should be some liaison with the tax department and with social security. The different systems in theory should be sharing information.

> *Now that's the theory. The practice is that government is much more silo than that. [Technical expert]*

However, mixed teams meant members who were civil servants and permanent, carried organisational memories from work done years earlier, so were able to reach across the silos. For example, the tester could ring a business department that she had worked with years before to tell them she would be on board for a new project, thus being a familiar contact between the business department and ISD.

External participants

Being an island there are not enough technical people to participate in producing systems that may serve fewer than a hundred island organisations, so the team included contractors from outside the island who were project leaders, software developers, and a technical integration expert, though not the consultancy's employees. Three of these contractors were

available for interview. A number of testers from the client side were also team members, and came with business knowledge, and some technical knowledge. All worked together and with other ISD groups such as operations and firewall experts. A story illustrates their participation literally, when someone took a photo of a team working together.

> *The firewall guys and [technical expert] stood there with a piece of paper because we were managing it as a live incident and we managed to get the right people around to make the decision, on the spot. So, that for me was team working, like a real practical example of it. [..] And we took the choice across all the teams there. [...] One of the tax team took the photograph in black and white because he saw us all gathered round and trying to work out what was happening [E-services manager] .*

The photo shows the technical expert holding an A4 logbook, one hand to his chin in thought and three others facing him, one looking down at the logbook. Two more people are sitting at keyboards, looking at their screens, whilst the e-services manager stands to one side, regarding the technical expert, and possibly looking over someone's shoulder at a screen.

Widening participation

A project leader gave an example of widening participation to users as well as ISD people, so bringing in others that were not directly involved in the technical aspects of the project into project development discussions:

> *We had a discussion about fishing licences on-line and when we were in the initial meeting 'cos [programme manager], [e-services manager] and I were in the initial meeting with the lady from fisheries.*

Participation also helps individuals to grow, so the technical expert argued:

> *If I really want to grow then I need to start speaking to people*

Not all the participants in the programme had direct contact with the consultancy CEO. Those at senior management level, such as the e-services manager and the BSM did. They were contact or intermediate clients (Schein, 1997). On the other hand, people lower down the structure had little or no contact with the consultancy and may not have been aware of its influence, hence could be classified as either indirect or unwitting clients of the consultancy.

The consultancy influence on the procurement framework had a consequent influence on the contractors' work whether they were aware of it or not, so the contractors became clients of the consultancy through working for ISD, and paid by ISD.

Interviewees talked about maximising people potential, about the knowledge they had in their heads and how they would diagram it, about everybody bringing their own skills, and that although it was "*nice to be able to be friendly"* doing a good job was important.

5.2.3 Expertise

This section analyses what expertise participants contributed. In this case study, participants used management, consultancy, technical and procurement expertise.

Management skills

The e-services manager's role was to talk to departments about their intentions for online services and ensuring that they had a robust business case for the funding. He was an intermediary between strategic groups including the ISD business systems manager, and accountable for delivering online services to time, budget and requirements.

Project leaders ran teams of developers that might include contractors. They had business and technical experience so tested live systems and liaised with their counterparts in business departments.

The programme manager believed that business people had to learn something about the way that ISD could work most effectively, and that meant understanding their methodology

> *What they learn from us is the benefit, the importance of having a methodology, of not just saying yes we want something, go away and do it please, you know. I think there's some people out there live in that world. So I think we do bring a discipline to departments [programme manager]*

ISD people learned from business people what was real value added and what was not. They also realised that their users used their systems in unexpected ways and learnt from that experience.

> *What you quickly realise is there's all sorts of shades of types of people out there and it's not necessarily the obvious kind of intelligence equates to how easily they use the system. Some of it's, we got that wrong, didn't we? Or we could have done*

> *that better. And we're currently trying to improve the log-in process the registration process for that very reason. But it's not always the brightest people who deal with this system best. Some people don't. They just get things wrong,*

When the skill sets intersected, people had to cross from their comfort zones, which could cause steep learning curves. The programme manager:

> *When we first did it, I had a steep learning curve on some of this stuff. I understood how a project works. I'd obviously been doing some of this stuff for some years on the tax side but as a programme and engaging with multiple departments at the same time, was interesting.*

Strategy was the remit of the two CEOs. Business systems managers contributed input from other parts of government and the ISD CEO together with the consultancy CEO liaised with them. The programme manager and the e-services manager together contributed planning skills. What was good about the plans produced was their public use, being displayed prominently for all to work with. The head of business systems was critical to *"bringing the project about and protecting the project from external influences*."

Technical skills

Technical and management skills are both needed for IT project management. ISD people knew about PRINCE2 although the methodology followed was a simplified version of it, rather than the full-blown orthodox and somewhat bureaucratic version mandated in UK central government. The ISD CEO and the consultant CEO put the methodology together aiming to find something that would enable control without bureaucracy.

The contractors came from three different agencies. Briefs varied:

Contractor 1 was a developer who coded programs, and wrote technical documentation.

Contractor 2 appeared to be the technical guru for all things to do with Web 2.0, so was a resource for anyone with a technical query about new approaches because he knew how the whole system mapped out and how objects were constructed, deployed, delivered, supported.

Contractor 3, the programme manager, had a mixed relationship, working with senior management, testers and analysts. The programme manager oversaw all the projects that made up the programme.

The ISD development team contributed testing, construction and delivery to plan. Their technical skills included XML, and scripting languages, and being able to use them to create test scripts to run tests before handing over a service to a business department. The tester who contributed long experience of the business, learned from contractors who contributed by training the public servants in new technical skills:

> *I've learnt XML recently off [contractors] because we were testing the messaging alert side of things and I actually had to write XML, a couple of XML test scripts because there wasn't a way to emulate.*

The contractors were needed for their complementary skills set. For example, the programme manager, a qualified project manager was able to break down requirements and match them against resources, together with checking critical paths and allocating scheduling. The technical expert, "*a magic bullet,"* had skills as an online services architect for physical kit and looked at physical code construction, deployment and support. Because he had a mind map of how 2000 objects supported the on-line service, he did a lot of the high-level documentation. Without these complementarily skilled team members, the e-services manager averred that the team would struggle.

Contractor 1 was a developer with expertise at a detailed technical level. His skill set supported contractor 2, the technical expert who knew the "*broad brush of things*," whereas the developer knew "*in an annoyingly detailed way*." The comments suggested that the developer did not think the same way as the technical expert, and even found it slightly irksome to end up "*having to put all the detail in*." This detail seemed to be the developer's forte, though he admitted it was not always appropriate to talk about technical stuff. He learned from the technical expert:

> *I'll sit down with him after some of these meetings […]. He's got quite a bit of knowledge of the tax system and the mentality of them. He's got a vague idea of*

> *what it means, many more so than I have. He's someone you can bounce ideas off him in that aspect.*

However, this interest in detail meant that the quality of what they were delivering was excellent.

Consultancy skills

The consultant contributed strategic skills and, avoiding internal politics, helped business departments' heads to learn strategic thinking. The consultant contributed help for business departments to adapt to overall government strategy.

The consultant's perspective indicated his skills were interpersonal and strategic together with a business understanding. For example, he said he tried to get people to think strategically and understand the long-term view:

> *[…] strategic thinking to get them to take a long-term view. An awful lot of the work I do is around trying to get them to understand that and trying to educate them how to take a long term view on these things.*

He also asserted that his consultants provided focused expertise without other distractions because they did not have other tasks to do. They also brought an alternative culture.

> *They bring a level of counter culture to it. They're not part of government and because they're not part of government they cut across the grain.*

This counter culture is important because it brings value through a wider perspective to the work of the civil servants, through enabling strategic awareness in the political arena. The island politicians work closely with their ISD civil servants who had communicated a vision of IT that required efficient use of IT and quality business change. They also needed to be able to share that vision with business departments, and that was the consultancy's role, to help ISD share vision.

Problems of contributing expertise arose when people from different functional areas were thinking differently.

> *We're all talking IT perspective about strategy yet the departments can sometimes struggle to understand strategically where they're going and that's clearly a problem because we've got the department thinking in terms of tactical thinking and we're trying to promote five year plus strategic thinking [CEO consultancy]*

Compartmentalised business departments that are protective about and do not want to share their data hinder by not contributing, such compartmentalisation offering a challenge to ISD.

Another problem was working at an inappropriate level with the businesses. For example ISD had been working with someone in a business department but he was not in a position to authorise IS work.

> *We was naively going on thinking, "this is great. We'll get this done ever so quickly," only to find out that management hadn't been in the loop and had all sorts of issues, and questions. So we learned from that one to make sure we engaged at the right level with management.*

This hindrance draws attention back to participants as a condition and its integration with expertise because the pattern of expertise implies that engagement is across functional boundaries. Participants who successfully span the boundaries are able to share knowledge. For instance, the programme manager the spanned boundary between information systems department and business users, and that knowledge could be used when the right participants were included.

Procurement and negotiating skills

ISD and the consultancy had worked together to set up a framework for procuring contracted software developers with the best skills and the best fit for the team. From the framework, ISD had negotiated with a number of contractor agencies to offer long-term contracts at a lower rate. If the agencies demanded a higher rate, then the contracts were offered for a shorter term.

A second aspect of procurement was that the business departments had to procure ISD services by going through a particular procedure to check that the required IT work supported business strategy and overall government objectives. This is interesting because it affected procurement in case study B.

5.2.4 Emerging behaviours

Sharing

People in this ISD shared aims, values, commitment and pride in the work they were doing together. The open access to the programme plan exemplified the open attitude; it was available for all to see, kept on the wall of almost every meeting room and treated as an important tool to help align objectives, shown in Figure 5-1: programme plan. The programme plan helped to coordinate the various projects and resources that made up the programme.

This shared plan linked with the government plan for deliverables.

> *So, they know what first we're striving for and also in a shared way what they are also striving for in terms of outcomes. [e-SM]*

The e-services manager told contractors that this was the plan they had agreed and he wanted commitment to that plan. He regarded contractors as holding objectives shared with other ISD staff "*because otherwise we wouldn't all be aligned on the same network."*

The consultant took some responsibility for creating teams that were a mixture of ISD people and contractors from different agencies, arguing that it was important to get the balance of the team right so that there was no one agency "*overarching we own everything*". Similarly, he wanted all departments to buy into a bigger vision for the good of everyone. 'Everyone' included not just ISD or government but the whole island. The economic well-being of the island mattered to the interviewees who had all had invested in the island, such as house, education, family, and career. The organisational culture reflected these shared values.

Problems of sharing sometimes came through a misunderstanding, a change or a disagreement of vision so when the business departments wanted IT delivered, the consultant worked with them to align their requirements with ISD delivery capabilities and overall strategic vision. He averred that openness and honesty helped him build trust with his clients so that they more happily aligned objectives.

Political issues, which often hinder relationships, helped in getting teams to bind together through sharing a common enemy.

> *[The chief technology officer] […] was seen as being a disruptive influence on the project team, essentially because his understanding of technology wasn't the same as our understanding of technology. He had certain constraints on feeder technologies you have to use you can't use these others even though they're better, sort of thing and that's the sort of thing that helps the team gel well because we've a common enemy [technical expert]*

Problems of public understanding of IT systems hindered sharing with the public, the ultimate client. Some years earlier, the IS department had publicly announced a major initiative that then did not materialise, so learnt to be a little more circumspect about IS programmes.

> *Initially […] we were working on the project and we didn't really want anyone to know about it, and this was caused by an initiative that had gone live three years earlier, where everyone was promised this virtual space on-line where you can go in and do things, and nothing materialised. Nobody signed up. They gave free email accounts to everybody on the Island so there's massive publicity; there were planners hanging around [] and people signed up and there was nothing. I wasn't here at the time but the one thing that was drilled into me by [the e-services manager] was it's not going to be the same. [Technical expert]*

Participants need to be saying the right things, and preferably the same things:

> *if the sponsor's saying one thing and the development team is delivering something different, or if there's some other influence on the project that means that it's going to either derail the project or cause issues, [technical designer]*

Sense making

Interviewees talked about people discussing technical reasons and translating wants. Some get technical: "*I normally leap in at the detail end*." [Developer] The programme manager recounted an incident when they were surprised by users' wants, when the development team put forward what they thought was a great idea but the users wanted something quite different.

> *We thought that yeah that would be fantastic, but actually, when we engaged with them it was "that's okay but we don't expect that much take up. It won't benefit us much. But what really would [benefit us] is a telephone payment service."*

The consequent system when implemented brought in a lot of money for the government,

> *Three thousand four hundred payments which is remarkable considering they haven't been live very long [Programme manager]*

The programme manager went on to comment that ISD learnt from business what is real value added and what is not.

Sometimes technical reasons are difficult to understand and the tester said that sometimes she might have a grand idea but the developers come back with reasons why it might be better to do it another way.

The e-services manager explained that with use and reuse, people came to a common understanding of a particular term, and he gave an example.

> *So that base model there was what we'd reuse for the next service and the next one and the next one so, rates on-line, they don't even ask when we say the word 'individual' what does that mean because people there now know what 'individual' means because it's part of what we've already grown.*

Team members and senior managers all talked about discussing before agreeing and deciding.

There was not much evidence of problems of sense making, apart from noisy rooms making some conversations less easy, though the absence of evidence does not mean that problems did not exist. The developer for instance was going through a learning curve to talk with business people without being technical:

> *We want to try not to think how things will technically work, more so from the users point of view, how will it make sense to use this thing or will it be more confusing or longwinded or whatever. We try not to be. Sometimes you need to just make them understand why something might be difficult to do or time consuming to do.*

Adapting

The consultant appeared to adapt according to whom he was talking, and with whom he was dealing. Helping business departments adapt to overall government strategy included coping with personalities:

> *There are certain personalities, which can get in the way. If we can manage those personalities then everybody's life can be an awful lot easier.*

The IS department adapted as it learned, for example being initially too open and enthusiastic about new projects, and assuming that the person they were working with had

the power to authorise IS projects, the lesson being the need to adapt participants and according to participants.

5.2.5 Interactions

Having assembled the information on the case study, the next stage of the analysis is to examine the fit between components and interactions. This was done by examining for data that was double coded, looking for instance for examples of data coded both for environment and for sharing.

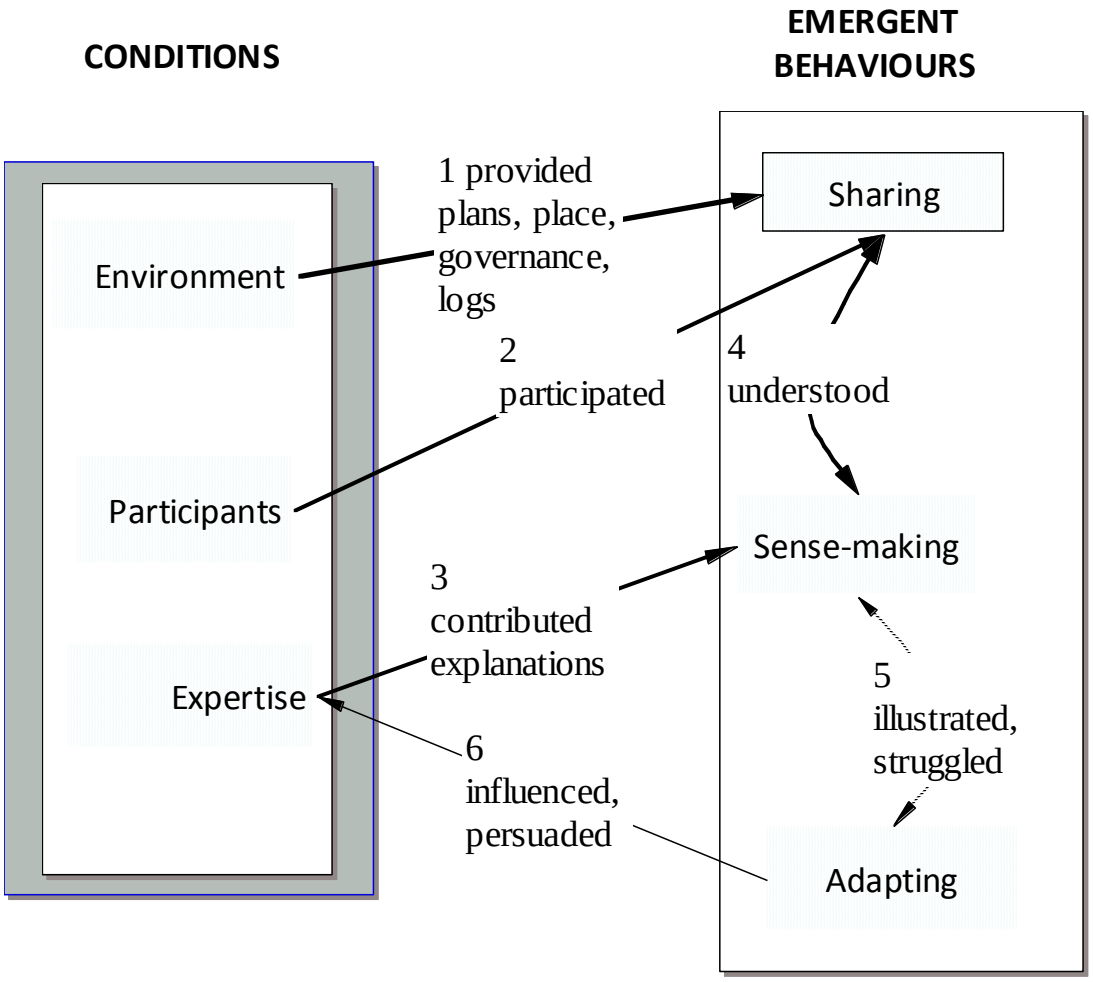


Figure 5-5: interactions in case A

Environment and sharing (interaction 1)

Being able to share environment meant being able to share problems and discuss them. Participants shared artefacts, particularly the programme plan, which seems to epitomise a

culture where participants expect to share information between key parties. ISD clients & developers logged incidents as they occurred and used the log to share information on actions taken. The consultancy CEO shared time with department CEOs in order to develop IT strategy that was aligned with the overall government vision.

Participants and sharing (interaction 2)

The consultancy CEO told a story that showed that changing participants changes the shared and achievable strategy. One of the departments had a difficult project that was not going well for two reasons. One was because it was using technology in a slightly different way, in an organisation that was not necessarily ready for that change. The second reason was two participants who believed the project would not work, and whose interests were best met if it failed.

> *What we really needed was for the hard decision to be taken that the project should be stopped and that we should reselect the partner. Now within a private sector environment that would be a relatively simple task because you can speak with the board, the chief exec and say this is the decision, this is why it's wrong we're wasting money right. Now we're wasting time. I think we need to change the partner we've got in here. [...] what seemed to be happening is the two individuals who were quite senior wanted to trip the project up were using this as an example, not of the particular supplier failing, but of the whole vision in that area failing.*

The consultancy CEO shared the values and objectives of the business CEO, but the two individuals did not share them. Once the decision was made to remove those people, then the IT project proceeded successfully.

Expertise and sense making (interaction 3)

The sense making of case A, meant suppliers had to understand user requirements before they could deliver the IT, and users had to understand what knowledge the suppliers were looking for. Participants explained either technical or business knowledge. The contracted software developers investigated and learned requirements from the user who understood the business but did not understand or need to understand IT.

Sharing and sense making (interaction 4)

Consultants and ISD management regularly shared information on IT strategy and progress

> *I sit down with [the BSM] once a week, with [the CEO] once a month to understand exactly what they're trying to get in terms of outcomes. [Consultancy CEO]*

This interaction between sharing and sense making is important, because those behaviours cycled regularly, reinforcing each other as depicted by the double-headed arrow, and producing outcomes of value.

Sense making and adapting (interaction 5)

In case A, the consultancy CEO illustrated through stories as recounted above how making strategic sense was a struggle for government departments. The struggle to make sense required adapting and further adapting as consultants influenced and participants contributed more explanations, so more sense could be made. So again, the connection between behaviours of sense making and adapting is depicted with a double-headed arrow.

Adapting and expertise (interaction 6)

This last interaction is interesting because it shows evidence of feeding back from the emerging behaviours to the conditions, altering them. The consultants took time to influence and persuade.

Figure 5-6 on page 130 below summarises these six interactions between conditions and emerging behaviours. Thinner lines such as connection five imply weaker interactions, or less evidence of interaction, whereas thicker lines, such as connection 1 imply stronger interactions. Hence, link 5 is dotted because of the business departments struggle to adapt their business objectives to support overall government strategy. Sharing is the behaviour that seems to matter most in this case because of the interviewees' emphasis on teamwork.

5.2.6 Value

The next step is work out how value was created from the emerging behaviour.

Interaction 7: how did sharing produce value?

Intangible value accrued from exchanged and increased knowledge and improved relationships. People with pride in their work professed to do a professional job. Relationships were businesslike. Small talk mattered at all levels, because at operational

level, it gave a feel of ease between parties, whilst at a strategic level, managers discovered commonalities that eased their negotiation. That ease built trust. Trust was important to the people that had not met or worked together before and came into negotiations, some less formal than other negotiations. Although formal meetings allowed audit trails, which were important for accountability, cafés and informal contexts eased communication before formal recorded meetings were held. Informal and soft methods can ease difficulties:

> *"There are some things which can be very difficult to deal with formally within a project but which if they're dealt with in a soft way can ease the route of that project." [Case A/ B, Consultancy CEO]*

There is value in using engaged relationships to handle wicked problems, problems that are not amenable to known solutions or project methodologies.

Interaction 8: how did sense making produce value?

The programme manager recognised tangible monetary value from interacting with business stakeholders thus identifying a system that would bring in significant amounts of money. Alone, ISD would have implemented another system and without ISD, the business stakeholders would not have had the technical resource to collect the monies.

> *We learn from the business in that sense what perhaps is real value added and what isn't. [Programme manager]*

The fact that the incident happens implies that other opportunities are missed. Nevertheless, when participants possess, exchange and acquire knowledge they can use it to obtain value for money on projects. This implies a possible feedback connection from the value of emergent knowledgeability to the conditions.

Interaction 9: how did adapting produce value?

The client adapted behaviour to control the environment. For example, ISD standardised its supplier requirements through a procurement framework, because that would improve delivery. As another example, following through from interaction 8, the programme manager adapted his resources to produce the system that the business stakeholders had identified, thereby creating value for them.

The value gained from these interactions is summarised in Figure 5-6 below.

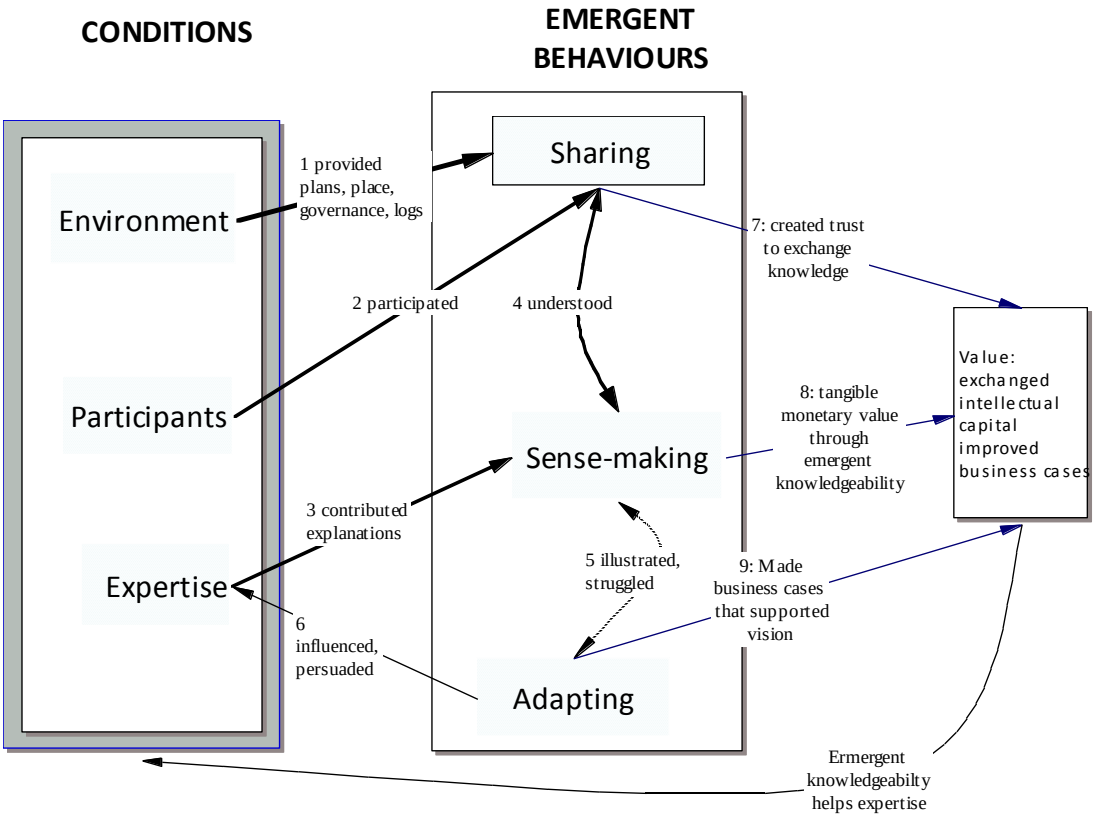


Figure 5-6: value in case A

The apparently most important behaviour, sharing, produced value by creating trust between participants. This was the consultancy CEO's objective: "*to create the best team*."

The weakness of interaction 5 might mean that the client's ability to identify moneymaking systems that supported government objectives was also weak and could be enhanced.

5.2.7 Summary case A

For this ongoing programme of software development, the conditions were stable, and participants had been involved for at least a year by the time of the research. The more variable components of engagement were the emerging behaviours. There seemed to be constant iteration of sharing and sense making between participants, between technical contractors and ISD staff, as well as between ISD and government business users. These behaviours led to adapting when for example ISD and business users together realised a

potential business case worth IT implementation. Additionally, sense-making behaviour created value through increased knowledgeability, and influenced participants' expertise.

5.3 Case B: discussion

The following discussion analyses case B, which has some overlaps with case A, being a systems development project for the same island government.

The next section considers features of environment and participation.

5.3.1 Environment

Place

The physical context at one level is an island, which is interesting because the physical boundary means any project deals with smaller numbers of people than IT projects for larger governments, but the processes are the same. A vehicle that requires licensing in the UK for example has the same attributes as a vehicle on a small island, so the system that sets up the license has to process it the same way. Fewer vehicles may mean a smaller database, but do not mean fewer processes or fewer programs. However, people available to create those processes and test them, on a small island are fewer – there is a smaller pool of resources to draw on. Therefore, there is the same amount of IT work to be done as for a large government, but fewer people to do it.

At a more micro level, the physical context is a set of government offices in various buildings across the Island. Communication facilities included face-to-face, phone, email and teleconferencing because the physical context of the software developers was in another country.

Software developers and user representatives of the old system met face to face to discuss what use would be needed of the new system. Users explained what the current system did, and developers elicited business use cases of what was needed of the new system. "*We met; we sat round the table, here often*," said a user. They also spoke to each other every day by phone, email or teleconferencing. When the system went live, the software developers came to the Island, so were physically present and available for a week beforehand, sitting in the same building. Thus, they supported the users, who also tested the new system.

The project manager, who was a consultant, not only met the user representatives at fortnightly project meetings, but also often met other users between times on an informal basis; "*he was over here in between times as well*." From the user's perspective, he was accessible: "*I knew when I was struggling that I could just pick up a phone*". On the other hand, to the users, other senior management were physically present less often and not available, but someone that users knew only to say hello to when passing through the office. The project manager from the consultancy was based in the ISD offices. This made it easy for him to talk to technical people: "*they're all around me so if I need to speak to somebody in the group I can."* This made it easy to have quick informal conversations: "*Quite often you can see someone you know and it's a good time to speak to them*" but if he needed to speak to the project's software developers, phone, email and teleconferencing were the more common means of contact. The user buildings were a five minute walk from the ISD offices, which is why the project manager often could walk up to the users' offices to see and talk with them. Whilst they could and would phone him, for the same reason, they could not see what he was doing to know when a good time to talk to him was.

On the business side, a small islands business group meets regularly to discuss issues that governments of similar small islands face and the group includes a forum to look at and share best practice on transport. The business systems manager was an active member of this forum so was able to appropriate assets from this context to use in the IT context. The BSM and his director went to this other island when they were first discussing adopting the system, intending to procure the same developers. At this other island, they met people who had already used it, and the agent who provided the software developers. The software developers produced this system for two other islands, the point being that the island context influenced the development of this product, and thus the product having been developed for one island was perceived as suitable for another.

Figure 5-7: boardroom

The steering group met near the ISD CEO's office, which is quite a large meeting room and has a boardroom style feel to it. See photo in Figure 5-7. Note the shared programme plan, visible on the wall.

Artefacts

Shared objects were physical paper documents and emails. These included project documentation such as opening and closing documents because ISD introduced a programme and project methodology drawing together the required standard set of processes and policies, loosely based on a variation of PRINCE2. This also set up expectations for negotiating contracts with outside suppliers.

Time

This typical time bounded project completed slightly over its allotted plan. Formal time was allocated to steering group meetings, and informal time for participants to meet. For instance, the PM was available to provide half an hour if a user rang him with a query. The users shared time by being in a shared place.

5.3.2 Participation

Participants in the project included members of the steering group and of the project team. However, being a formal participant is not the same as participating so this section will look at who participated and how.

Governance

The island government maintains governance to enable "an overarching perspective of ICT" and its effective use. Another reason for governance is that it manages risk and instils accountability (Island strategy document, 2007). The ISD governance structure as in case A, requires a business change steering group, and reporting to the steering group is a project board for this particular project, shown in Figure 5-2 and Figure 5-3. Figure 5-8 shows governance for case B, which is detailed at page 327. The role of the Business Change Steering Group is to oversee strategy, and the Project Review Board oversees the technical approval, processing and development of the project. The structure follows PRINCE2 guidelines (OGC, 2008c) that a project board should have a representative from the users, from the supplier and from the customer. The project was structured with a steering group and a project team. The steering group had individuals from the client side, and from ISD, who included the ISD CEO, the consultancy CEO and the project manager who came from the consultancy. The project team included developers (contractors) and business experts from the client side.

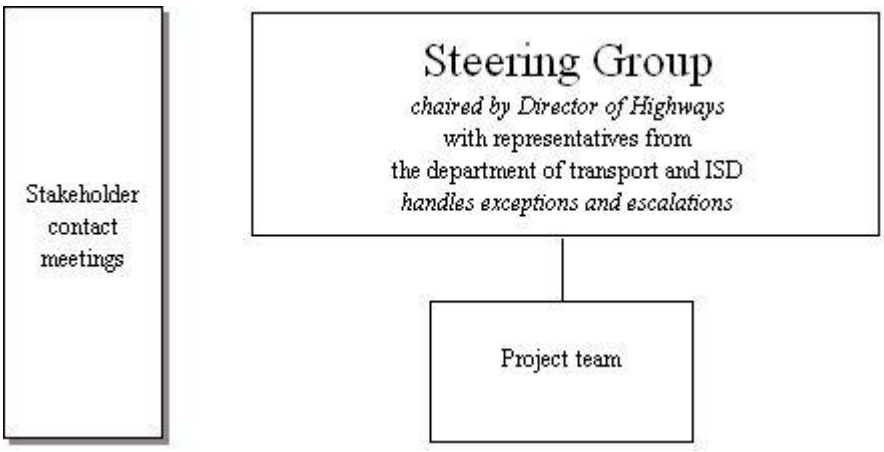


Figure 5-8: governance structure case B

Participants

Chapter 4 indicated key parties to this project. The following diagram adds to this by showing participants being from business, ISD and outside. See Figure 5-9.

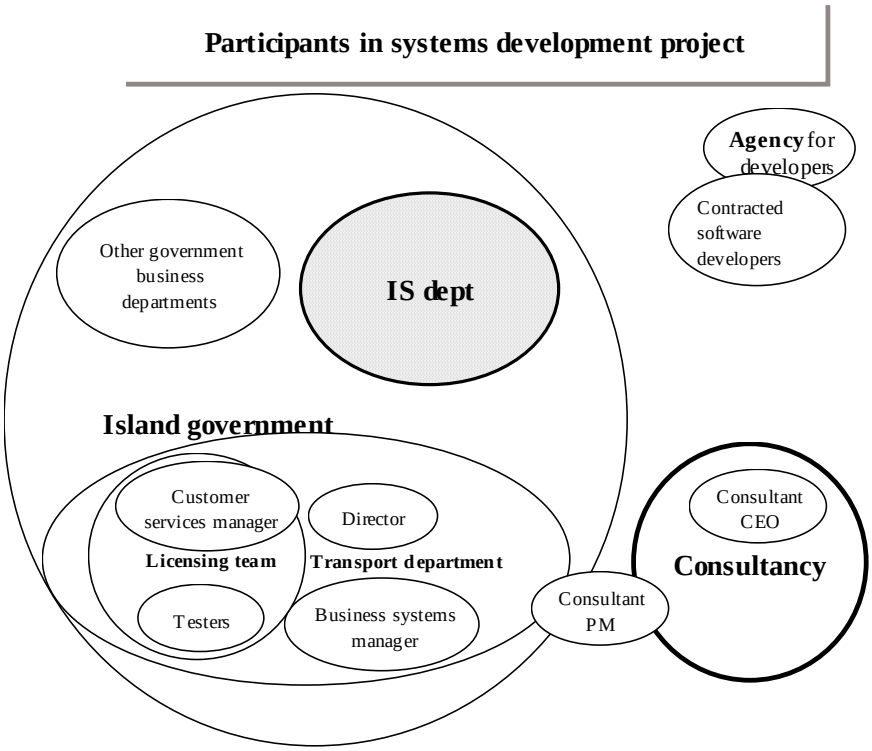


Figure 5-9: participants in case B

Business participants

The users who actively participated included the Licensing Officer, the Customer Services Manager, the Business Systems Manager (who managed the programme on Highway's behalf because it did not have the dedicated resource) and the Post Office representative. The Post Office had a stake in this system because the PO administers vehicle licences. Also actively participating was the consultant who acted as project manager and represented ISD.

The transport department formed the client and consisted of departments including licensing and highways. Its representatives were the business systems manager and the director of management services who viewed key parties as departments and groups that included ISD, end users, software developers, the third party agency that supplied the developers and the

small islands business group (SIBG). The SIBG is not included in this figure because although it influenced the project, it did not participate. On the other hand, the Customer Services Manager (CSM) and the Licensing Officer (LO) who did most of the testing, had slightly different perspectives of who was participating, talking more about individual people, such as the consultancy PM, named software developers and the Post Office representative. They saw their important working relationships being with the developers and the key relationship on this project as being with the consultancy project manager. The slight discrepancies reflect the different perspectives of the different people participating on the project. The licensing officer worked closely with the developers, hence was more likely to include them.

The process started by getting people at a higher level involved. Major schemes like this project include an initial presentation to the department including the minister, political members, the chief executive of the department, the department's director of management services and the strategic planning officer. The strategic planning officer had a governance perspective *"to make sure that the IT thread was connected to the policy and development thread.*" [Director]

> *The original aim had been to get key stakeholders to participate in the project, but that didn't quite happen. The project manager explained: "We put our political antennae up to say there are a lot of other stakeholders in this. Let's involve them in a consultation process and let's see what their requirement is."*

The business users, including the licensing officer and the customer services manager understood the previous system and participated because they were end users of the system. Though they had no previous IT experience, they were central to the development because they knew the old system and what functions had to be done and how. Consequently, the steering group and the project manager came to the users for business information. However time for testing was an issue, as the users did not have the resources in terms of time and people to test, being only a small team.

ISD participants

There were few ISD participants and those were on the governance body. In fact, a problem of participation was in getting ISD to participate at the initial stages. The director remarked on difficulties of getting relationships with ISD.

> *Our internal consultants are definitely part of the picture. I mean, it's always been one of our problems is getting a really effective relationship with them [ISD]."*

This was because when the project started, ISD did not have clear procedures to help user departments raise requests for services; the procedures were too cumbersome or requests were dealt with on a sequential basis rather than prioritised on how the IT change would benefit government as a whole. ISD priorities were not initially the same as Highways; if ISD and Highways priorities did not coincide then Highways could not do anything different. To the director and the BSM, ISD appeared less than helpful, so once they had identified a potential system that did what they wanted, they decided that if ISD would not help them, then they would go outside to get it implemented. Because the software development company that the BSM recommended was not one that the island had used before, ISD did not immediately want to participate.

The ISD lack of participation at that time was made up for by the enthusiastic participation of the BSM.

External participants

The contracted developers supplied by the agency, were, according to the user, very committed. The licensing officer found productive relationships existed:

> *We had a deadline that I could appreciate that [the PM] and [software developer] and everybody really wanted it all nice about it all. I could trust them; they were nice about it. Yes it was just the whole, whole team […] they were so good to work with really and so helpful.*

All the participants in the project had direct contact with the project manager from the consultancy, and some at senior management level with the consultancy CEO. The director stopped going to the steering group so the customer services manager represented the customer instead. That might have caused problems, as the director was the sponsor with

the power to authorise resources, which the customer services manager did not have by virtue of being somewhat lower in the hierarchy.

The map at Figure 5-4 is a static representation of the participants where boundaries imply relationships between members of those departments. A project requires people span boundaries in order to exchange knowledge and, in this case study the known boundary spanners were senior managers and the consultant.

5.3.3 Expertise

This section analyses what expertise participants contributed. In this case study, participants contributed project management, technical and business expertise.

Management skills

Management and project management skills overlapped in this case study in that the project manager understood the requirements of project management very well, and was highly trained and experienced, and recognised the need to manage people as well as projects. The consultancy CEO also understood and used people management skills to persuade and influence clients and to support his PM with advice.

Technical skills

On the IT side, the ISD and the consultancy PM represented the software supplier on the steering board. Contracted software developers provided practical expertise, technical skills, contributing the code, as well as training the users. The PM remarked, "*They are key because they built the components, one part of the process*."

Business knowledge

The steering group, following PRINCE2 principles, included people with authority in three areas: customer business, system use and technical supply. The director represented business expertise, and together with the ISD CEO agreed the strategic relationship of this IT project to overall government aims.

The business systems manager came with business experience in other organisations. His knowledge and interest was very detailed even to the point of required drop down widgets to validate data entry on vehicle type.

The customer services manager contributed skills in the business, its current use and requirements. She had however, no experience of developing IT projects.

The users contributed business expertise. The users were given the task of testing the new system because of their long experience and understanding of the old system, and knowledge of future legislation. The users had to fit testing in with day-to-day work because no extra resource was available, and they were the participants with relevant experience and knowledge of the business.

The interesting thing here is the cross-boundary experience of the users who liaised with the PM and the software developers. Cross-boundary experiences generate shared understanding so people can work together. The users had practices they knew and understood from "*historical knowledge of the old system - over 25 years of actually using*." They then had to share and explain these practices so the developers could understand to interpret and implement them into the software. The PM helped mediate those experiences.

> *He knew a lot about the system. The user acceptance testing when we were trying to do things and find faults, he was a great help. If I was trying to get it to do something and I couldn't, I'd ring up [the PM] and he'd say he'd have a play around and say 'this is possible - this is not possible' and if you wanted it tweaking, then he'd go back to [software developer] and then come back and say yes*

The users relied on ISD and the project management team for technical expertise. The licensing officer required the PM's expertise especially just before the go-live stage:

> *In the few weeks leading up to go live which was chaotic so it was every day I'd actually want something from him.*

This is a typical remark from the user about the PM's expertise, which she appears to esteem. She learnt from the PM, and expected that eventually he would step back and they would know what they were doing.

The CSM had some background information and knowledge of the client system, but she and the licensing officer had no IT experience. Yet the steering group came to her and the LO for business information about what the current system did, what the aims were for the future, and what was needed from the system, evidencing that they had expertise about the business. She trusted the developers and PM's experience because they knew what they were talking about, even things that would seem impossible to her

Such project activities provide boundary experiences, which are "shared or joint activities that create a sense of community and an ability to transcend boundaries among participants" (Feldman and Khademian, 2007: 317).

The expertise of the software developers was, to the user, quite technical:

> *Maybe they wouldn't say it wouldn't work on the system introduce something and they could come back and say no, It shouldn't do this there's a constraint or there's a reason why it won't do it but they always explained it so nicely that I could actually understand*

Because she knew them, she trusted their expertise; they had credibility for her. The users learned and gained confidence in IT, and having been trained, they then started to train others.

The director and other senior managers on the steering group contributed time, resources and management vision. The BSM contributed to the initial planning. In the later stages, the director withdrew from the steering group. Whoever was responsible for ensuring time and other resources were available did not perceive the same problems as the users. This was a reason why the project overran slightly; the users could not dedicate the time.

Project management skills

Two consultants from the consultancy firm contributed project management skills. The first consultant some years earlier at the start of the project had managed the initial scoping, and the second consultant managed the project from the requirements analysis stage. He saw others' expectations of his contribution as proactively managing.

> *You have to be proactive. You have to be able to manage the suppliers. You have to be able to manage the communications. You have to be able to manage all the other stakeholders.*

The project manager had considerable expertise in business analysis and project management. For several years, his project management work brought him into contact with consultants, so he learned how they worked before he became a consultant. Three years earlier, as a consultant, he moved to work for the government ISD gaining government experience managing a number of projects for central government departments and their agencies. His expertise in project management methodologies facilitated the project through providing authority that helped to accomplish the project (Wastell, 1999).

Together the PM, the CSM and her staff and the developers contributed a lot of expertise to data functioning, cleansing and collection.

Cross-boundary contributions came from the project manager who spanned boundary between ISD and the business systems manager, and when he could not influence the BSM, he worked through his consultancy CEO to the senior business management.

Procurement and negotiating skills

An aspect of procurement was that the transport department had to procure ISD services by going through a particular ISD procedure but the transport department, two years earlier had found it difficult to get ISD interested in its requirements.

Secondly, as explained in case A, ISD had set up a framework for procuring contracted software developers with the best skills and at best rates, and this became an issue when the transport department wanted a different agency to supply contracted software developers who were not already known and approved by ISD.

Fortunately, the BSM was able to put forward suitable comparisons to persuade ISD to look at the new development company and to support the project.

> *If it hadn't been for [the BSM] pushing and getting some comparative quotes and so forth we wouldn't have been challenged to look at this outfit. But they were so much ahead on a lot of the tendering issues that we had to look at them and in the end we had to make some special arrangement. [Director]*

5.3.4 Emerging behaviours

Sharing

The people who had developed the licensing software for another island understood the needs of the users on this island to be similar.

The users trusted the developers' technical experience, thought the developers and PM '*brilliant'*, and they learnt together from each other, with good working relationships and complementary skills.

> *Everybody's got different components to deliver. You can't say that this is more important than the other - it's a team effort. [PM]*

The licensing officer behaved in a manner that meant she built a relationship with the developers through small talk: *"When I email [software developer] or something, we tend to talk about snowing in [the Country], or "what are you doing this weekend?" So quite a friendly sort of thing now*" whereas with the consultant: "*I don't need to ask him if it's snowing or whatever so we're more businesslike."* That friendly behaviour seems to have helped the user-developer working relationships.

The two consultants shared ideas and discussed problems, the consultant CEO acting as a 'sounding board' for the PM. The PM and ISD people worked with the client user. The user and software developers worked closely together in mutual agreement: "*We were supplying [software developer] and his team and vice versa*" – it is the '*vice versa'* that tells you it was mutual.

Problems of sharing existed in the business, as senior managers did not want to take business risk, needing an IT system that they could understand and work with immediately, rather some of the things necessary to deliver future requirements that could not be implemented at this stage, such as on-line services or a database. The original data needed to be cleansed because of inconsistencies; for example, there were 24 variants on the spelling of 'Mitsubishi'. This cleansing requirement meant that the database could not be implemented as part of this project though future legislation would necessitate it. However, the BSM

wanted features that would fulfil requirements of future legislation. The CSM was aware of conflicting pressures from future legislation and needed to comply with current legislation so had some sympathy for the BSM's plans for future development of a wonderful future "*pie-in-the-sky*" system.

Sense making

The consultancy PM trusted his CEO, whom he relied on to bounce ideas off. In the relationships between the consultants and ISD there seems to be an underlying reciprocal norm, a professional trust and an ability to talk at the same level. For instance, another person in ISD, whose role was programme management across all of ISD, provided knowledge about stakeholders that the consultancy PM would go to. If the PM needed information on people and the organisation, he could turn to him, as "*a very good sounding board, in terms of stakeholders*" and "*he's a great guy to work for.*" That is, the consultant would go to a client to talk things through.

Members of the steering group may not have had sufficient understanding of the business or technical issues. The BSM felt that the steering group could not question or challenge what was put before them so "*the targets were lowered much too easily".*

The users, licensing officer and CSM, understood the business and shared understanding through their working relationships. The users and the developers literally did not share English meaning because the developers came from another country; English was not their mother tongue. The users had problems with technical terms rather than English language difficulties. They indicated a lack of IT experience, struggling to explain what they needed to the developers with the project manager acting as an intermediary who translated "*user speak"* into developer terms. When users wanted something from the system, they had to use the PM to explain it in to the developers in technical terms and to the user in business terms before the two parties could understand each other but then, "*they always explained it so nicely that I could actually understand where they were coming from and why*" (LO).

The developers' expertise helped the relationship, but communication between users and developers may also have hindered progress.

In this case study, the project manager mediated between users and developers when they did not share codes, languages and narratives. The PM understood their systems of meaning and they relied on his technical knowledge so that they would learn enough to know what they were doing.

Adapting

When the project started, none of the users or the department's senior managers had had previous experience of IT development; they needed to do a lot of learning and adaptation. The BSM and director had to learn how to work with ISD but found their initial attempts rebuffed. ISD's expectations differed from Highways, which caused the BSM difficulty.

> *I tried to engage the ISD with it but they only really engaged when I finally threatened them, with going alone, doing it through [the agent] and not involving them [BSM].*

ISD turned down the initial proposal partly because the department was asking unknown contractors to develop it. The BSM said, *"I had a lot of problems engaging ISD - I couldn't get them to get involved in it."* Adapting was a challenging, painful experience until both parties could agree on the project, how, and who would develop its software.

The director thought the project had been a learning experience where they got expertise from the consultants in terms of IT project management, because the department did not do many large complex projects.

> *So it has helped in making us look at our own arrangements with ISD, and with [the consultancy], and how this section in management services deals with people in our own department, the Highways division, so there's a lot of learning points that come from the project.*

The director also saw people becoming more aware of governance and the importance of getting project management right. "*We have made an effort to use this project to get better processes for the future. I think we've still got a way to go."*

If there were difficulties, the steering group arbitrated, being the point of escalation. However, the steering group did not always meet everyone's expectations. The steering group expected the users to test the new system but at the same time continue with normal business, despite year-end activities requiring many resources and coinciding with the initial planned go-live date. The CSM's problems were with reconciling a steering group expectation of timescales and testing for niggles in the new system. The users had to adapt their participation in the project because they did not have the time to do their normal jobs and test as well. Secondly, they did not have IT skills, so had to learn a lot.

The BSM's job was to anticipate future requirements. However, that had caused problems of adapting because "*some of the things that are necessary to deliver the future we found we couldn't put in at this stage*." The BSM did not want to adapt his aims, frustrated by the project manager's aims to deliver the project on time and within budget.

> *Too quickly the contingencies became the preferred option and the steering group did not have sufficient understanding of the business or the issues to properly question or challenge what was put before them.*

Because of the requirement difficulties, the project grew into two phases; the first phase provided most of the initial objectives, but a second phase was started to cleanse data and allow links with other systems in the future.

Problems that the project methodology could not deal with initially were handled in a soft informal manner. The project manager adapted his behaviour according to participant behaviour. For example, before formal project board meetings he would phone the BSM to make sure he knew what was happening and there were no surprises. The consultancy CEO actively participated when problems had to be escalated up to the steering group.

5.3.5 Interactions

The next step is to analyse the components and their interactions. Case B indicates expected interactions between most of the conditions and emergent behaviours. This is not surprising given the evidence that the project completed to time, and budget, with some alterations to scope. It also shows some an extra connection where ISD received knowledge of alternative

software developers and adapted the strategy to include them; that adaptation influenced the choice of participants.

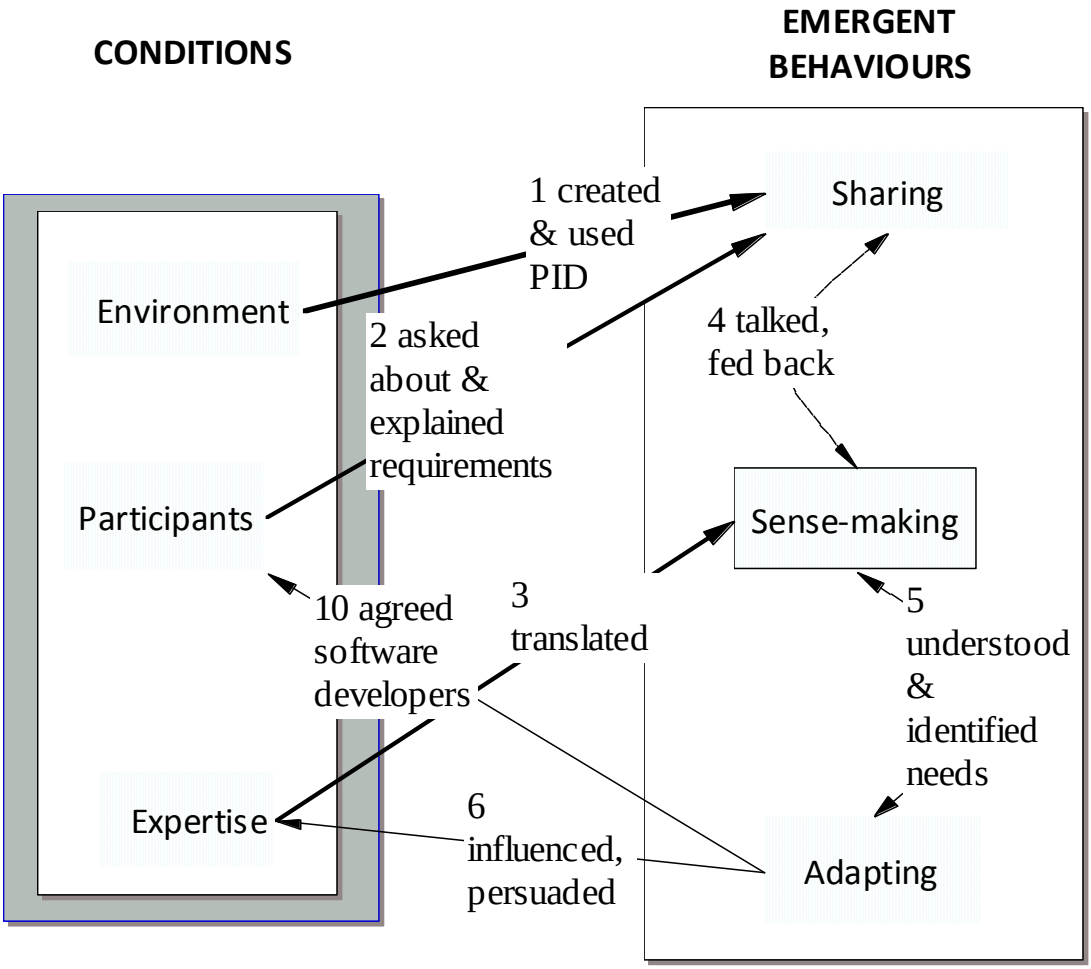


Figure 5-10: interactions in case B

Environment and sharing (interaction 1)

In case B, an artefact that was shared between key parties was the contract and the project initiation document (PID).

> *I had to engage with the attorney generals in terms of the contracts with the supplier, ensure that all the proposals for the contract was in place [PM]*

The governance structure was important for sharing feedback on progress, and this required participants from all key parties sharing knowledge on product and project requirements.

Participants and sharing (interaction 2)

Business users struggled with the changes and needed to contact the consultant PM for explanations.

> *When I was struggling, that I could just pick up a phone, [licensing officer]*

Participants shared time and explanations. For example,

> *We're reliant on [the consultancy PM] now to really tell us how to do these things, so that then when his job finishes he can then step away from it and we should know hopefully what we're doing [user]*
>
> *All the meetings were minuted and the minutes led the basis for the agenda for future meetings and there are core elements in there first of all development, secondly testing the processes and procedures and the risks and issues probably spent at least an hour talking [consultancy PM].*
>
> *Quite often I would have called them before a meeting just to make sure I was au fait before they told everybody else [consultancy PM].*
>
> *They came here at key points. At the start, delivery, proposal and then once the requirements had been captured they said what the solutions going to be and then at various stages for implementation [consultancy PM].*

Expertise and sense making (interaction 3)

The sense making of case B meant suppliers had to understand user requirements before they could deliver the IT, and users had to understand what knowledge the suppliers were looking for. The consultant PM acted as intermediary to translate business users' requirements into technical requirements. The customer services manager found the software developers used technical talk that she could not quite understand, so she used the project manager's expertise to translate.

Sharing and sense making (interaction 4)

Participants fed back to the steering group, using minutes as a basis for agendas for future meetings. The users and contracted software developers talked frequently in order to exchange understanding of business requirements in technical terms.

The consultant project manager identified and consulted stakeholders, seeking to persuade especially the business systems manager about project requirements, whilst the business systems manager sought to persuade his director about product requirements.

Sometimes I could get caught between the relationships - between the internal politics in the project [consultant PM]

Sense making and adapting (interaction 5)

Adapting requires resources, especially time, because sense making is time consuming and iterative. The impression was that the users had difficulty understanding what the contracted software developers needed to know. Adapting took effort and could be uncomfortable. The consultant PM attempted to make clients feel more comfortable, for example,

What do I need to do to make sure this stakeholder is positive? [Consultant PM]

The quote shows that consultant's behaviour can be important for adapting behaviour according to participating client.

Adapting and expertise (interaction 6)

In case B, the consultancy PM and his CEO spent time influencing and persuading, especially the business systems manager. In addition, the BSM influenced ISD, persuading the department to procure the software developers that he had identified. That knowledge led to a change of participants in the environment, shown in connection 10 in Figure 5-10, which summarises the interactions between the conditions and the emerging behaviours, his is a typical project with the emphasis on initial procurement, hence the actions on the stronger interactions 1 and 2, emphasising the project initiation document and requirements.

The above figure reflects the weaker interactions between sharing and sense making and sense making and adapting that came about through the different perspectives that the BSM and the consultant PM had about the project. The stronger interaction on link 3 represents attempts to make up for those weaknesses, though link 6 represents influence that did not persuade the BSM to share the PM's perceptions. That there are no dotted lines indicating lack of interaction is interesting, because it reflects the fact that every participant was dedicated to the project even when they had different understandings of the required outcome.

The figure has some weaker interactions. Interactions from conditions to emergent qualities exist but within emergent qualities, are some differences particularly on adaptability. For example, when the BSM could not adapt his perspective in order to share all project aims, another participant, the consultancy CEO, became more active and influenced steering group decisions. Hence, an additional active participant changes engagement. Another influence on value from engagement can be seen in the requests for extra resources for testing, requests that were not answered, which influences the interaction between sense making and sharing. These difficulties of emergent qualities mean that there are blanks on the connections to new value.

Sense making is the behaviour that seemed to matter most in this case because of the users and developers attempts to make sense of each other's knowledge, and because of the PM and BSM's attempts to see the project the same way.

5.3.6 Value

The next section looks at how the emerging behaviours created value.

Interaction 7: how did sharing produce value?

In case B, the consultant PM monitored the BSM's attitude by phoning him before meetings to share progress, to make sure he knew all he needed to know, and to share information, rather than have surprises at the meetings. Value was in the opportunity to share concerns and plans at an early point. This behaviour built trust, and lowered transaction costs by reducing the risks of scope creep.

Interaction 8: how did sense making produce value?

Behaviour that produced sense making allowed people to deal with soft issues, issues that methodologies like PRINCE2 cannot address. Methodologies do not plan for commitment to a project but sense making allows participants to understand what management and consultants are trying to do, thereby increasing commitment and reducing threats to projects.

Hence, in case B the consultancy CEO commented that spending time with the BSM allowed them to get him

> *to understand where we're going and what we're trying to do on a project by project level and that can make a project so much easier.*

Other value from sense making came through the BSM persuading ISD to use the software developers who already had experience of developing a similar system in a similar context. This behaviour seems to lead to emergent knowledgeability.

Interaction 9: how did adapting produce value?

ISD struggled to impose their choice of software developer on the Highways department, who struggled to persuade ISD to procure the experienced software development company. Adapting the choice of participant was a struggle and adapting to the IT development process was a struggle for the Highways department. Learning was happening; the director commented on new approaches since consultants had been involved, but was thoughtful, as if he had not realised it before the conversation. Therefore, perhaps value could have been greater and the connection is left dotted.

The figure below at Figure 5-11 summarises the value gained from the emerging behaviours.

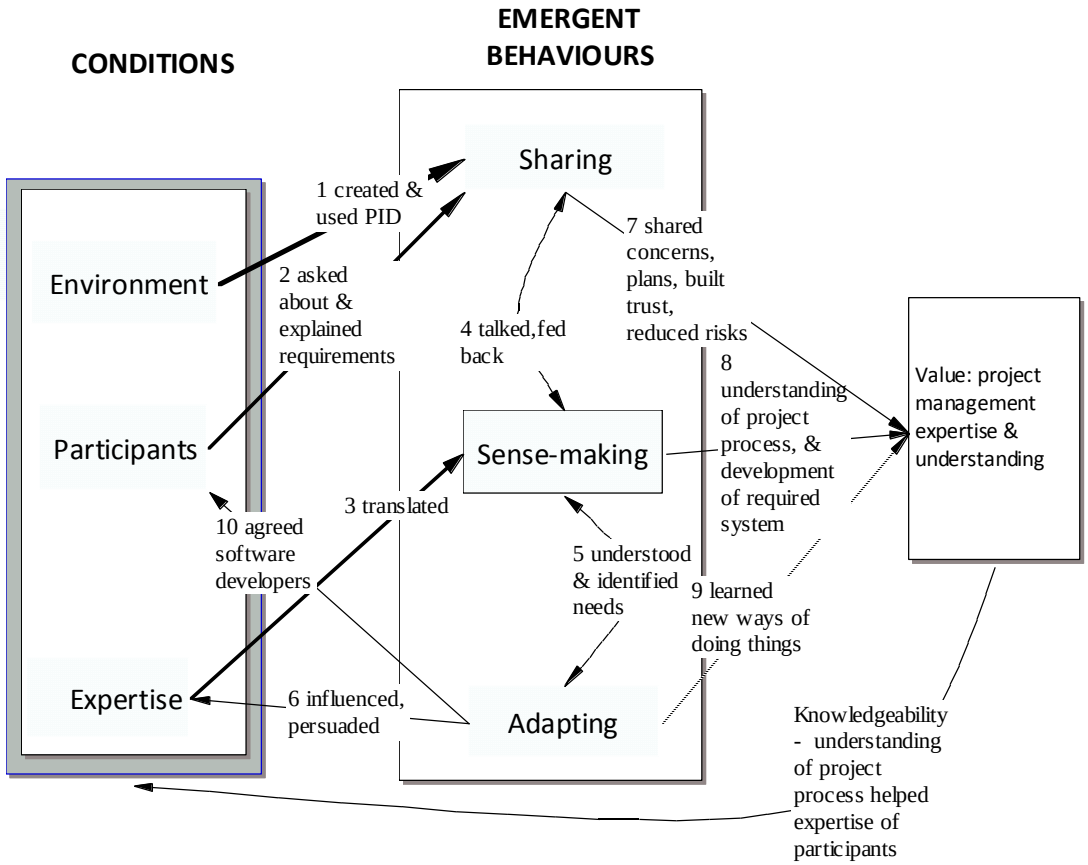


Figure 5-11: value in case B

5.3.7 Summary case B

This software development project is interesting for the effect of the emerging behaviours on the conditions. The behaviours altered the conditions, thus affording better conditions, which in turn improved the sharing and sense making behaviours, and thus the progress of a project that might otherwise have been less successful. Behaviours seem to cycle between each other and the conditions, suggesting a continuous interaction of engaged behaviours that altered the conditions to allow better contributions, which ultimately improved the value of the project in terms of its progress and successful completion.

5.4 Case C: discussion

This section describes evidence of engagement between consultant and council employees who participated in this short consultancy project.

5.4.1 Environment

Place

The place was the council offices, where offices or meeting rooms, people's desks and the coffee shop were used as meeting places. The consultant was given a spare desk in a shared room in the IS department where she could write up her notes, though she also went home to write them.

Artefacts

Shared documents included a project initiation document (PID) that acted as a scoping document and provided terms of reference, working papers for discussion with the IT manager at five stages of the project and a final report, with a set of slides and a review that summarised findings.

This last report is important to the project because it is the tangible deliverable and contractual output specified in the PID from the consultant's discussions and consequent scoping. It laid out the requirements of the system, reviewed the market and compared the existing supplier with a couple of alternative suppliers. It also provided an appendix with prices. A shortened document was prepared for the service strategic director.

Time

The timing of this project was due to the imminent completion of an old contract for software support and the need to renew or find a new one. The complexities of the existing system were being exacerbated by government initiatives for social care so higher requirements were expected of the technology.

The IT project manager managed the consultant, talked with her regularly, and gave her deadlines for five stages of the project: project initiation, requirements, soft market testing,

options appraisal and final report. The time allowed to complete the project was thirty days over three months, and was delivered on time.

The consultant organised the meetings at times that suited her, usually mornings, alternatively in afternoons if people could not see her earlier in the day. Usually she wrote up her interviews in the afternoons. The consultant did not do the detailed work; that was delegated to a young man from the IS department who supported her by sorting out meeting times and places as well as escorting her to and from meetings. The IT support explained:

> *The reason I got involved with this was because it was an independent consultant coming in who didn't know anybody here in the organisation. They wanted somebody to take her around, 'cos she didn't know where the different people, where their offices were. So, I got involved to take her to the meetings. I booked the meetings for her. I had a list of names. She said she needs to see all these different people. I booked the meetings with them, then I took her to the meetings, and there were some actions that came out of a couple of them, like she wanted me to do some spreadsheets, and stuff like that.*

Time seemed to be a difficulty and finding times when people were free "*was not the easiest job in the world*" the IT support reported. Some people could not see the consultant until five pm, and one person was impossible to achieve a face-to-face meeting with, so eventually a telephone interview was settled for. The IT support reported that he didn't have enough time to build a relationship with the consultant because of the lack of time, when even on the first day, she'd arrived around 9:25, and they went straight into a meeting booked for 9:30.

> *I went over to reception, and eventually shook her hand and then went straight in to, up to, the sixth floor, to go and meet the head of finance*

He regretted that, because he would have liked to have had an initial chat with her.

> *From that first day where we were straight up to the first meeting, we didn't ever really get time to sit down and catch up with each other, because there was only four or five minutes when, from the moment she would arrive, to, okay, we've got to go to the first floor and go and meet someone. We only got the time in the lift together, really.*

Therefore, the IT support spent time with the consultant, sitting in on almost every meeting, but rarely with time to get to know her. Though the PID included a clause that indicated the

consultancy would undertake "*informal skills transfer*" to him, the emphasis was on the informality of skills transfer, learning thorough observation rather than discussion.

5.4.2 Participation

Governance

This project was a consultancy investigation rather than a system development and seems to have been too small to need the formal governance structure of a PRINCE2 system development. It required only one manager from ISD.

Participants

The previous section indicated key parties in this project. The following diagram at Figure 5-12 shows known participants from ISD and the business side as well as the external consultant.

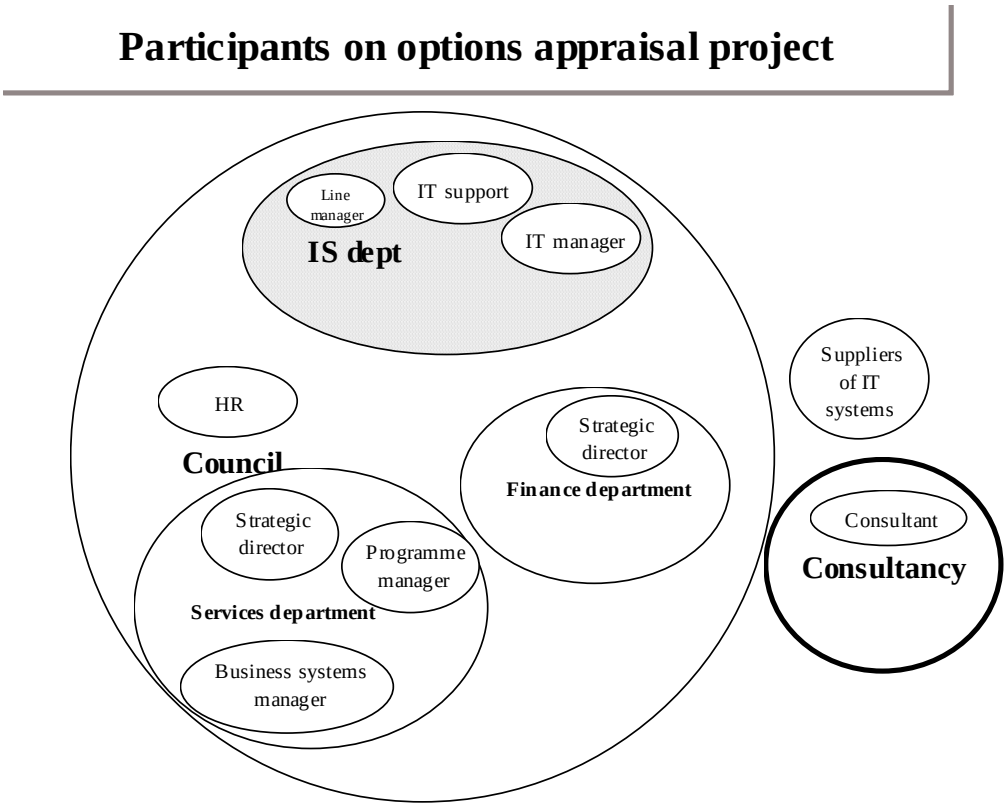


Figure 5-12: participants in case C

Business participants

The figure shows the council's relevant departments: ISD, HR, finance and the services department. It also shows outside the council system the IT suppliers and the consultant, who came from an IT specialist consultancy.

The consultant' interviewees in the finance department fed back on requirements and the subsequent documents.

The service strategic director wanted brief summaries of what she needed to know from the review so she understood the rationale for proceeding with the subsequent negotiations and IT procurement. She had to know because ultimately she took responsibility for the expenditure on the new technology.

ISD participants

The IT manager and the social service programme manager identified a range of people, including social workers, managers and technicians, in HR, and in finance that had views about what the service needed from the system and what the priorities were. The consultant's interviewees were a cross section of people in the social services department including operational managers and people who prepare management information from government statistics. The business systems manager was one such interviewee as a stakeholder who had previews of documents before they were widely shared. The IT manager vetted potential consultants, commissioned the consultant, briefed her and had regular discussions with her, thus acting as primary and contact client. The service programme manager, who sits on the board, and provides resources for the service, set up the terms of reference of the project, commissioned and funded it. She had early sight of documents before they were shared, and she reviewed the report.

The IT support provided on-site assistance to the consultant, such as access to spreadsheets and emails. He arranged meetings for her, and sat in on meetings taking notes but had little direct participation in the technical aspects of the project and did not interview or ask any questions. He reported on his limited participation.

> *I was sat in the corner. [..] I was jotting down actions for myself to do, and then get back to her.*

The IT support's line manager managed the IT support's time, balancing his normal work with the time out supporting the consultant. At one point, she helped him to write an email to the consultant to explain the pressures of his normal work.

External participants

The existing supplier was aware of the project. A supplier management mechanism that analysed areas such as price, quality and service existed already and had given the supplier feedback on what needed to be addressed but more action was needed so the company was interested in the project and delighted to have the opportunity to contribute.

A problem of participation arose through the IT support feeling that he was unable to learn from the consultant as much as he had expected. The IT manager did not observe the discrepancy between the contract requirement for skills transfer and the practice.

The map at Figure 5-12 is a static representation of the participants, where the boundaries drawn imply functional relationships between participants. The project requires someone who spans those boundaries in order to exchange functional knowledge. In this case study, the known boundary spanners were the IT manager and the consultant.

5.4.3 Expertise

This section analyses what expertise participants contributed. In this case study, participants contributed management, consultancy and business expertise.

One reason the project arose was that, at the time of contract renewal, the supplier displayed lack of expertise, leading to user dissatisfaction with the software and customer service.

> *It's very difficult to modify, and when they go into more modern technologies like web and stuff, funky fun pens and stuff like that, they're not as advanced as others. [IT manager]*

Competitors' systems were cheaper and easier to modify, and although perhaps not as technically advanced as that of incumbent supplier, the competitors were more responsive because they were eager for business.

Management skills

The chosen consultant had experience of social services, plus a background in managing and implementing specialist technology in the area. She also had strong interviewing skills and the ability to be credible in front of people who are cynical about consultants and the value they add, as well as the ability to extract information from suppliers and be independent about it. Web evidence indicates that other councils have used this consultant to assist with organisational and cultural issues, and suggests that certain skills were in her portfolio. The consultant describes her role with another council as *"to act as the Council's 'expert friend' whom they could call on for advice and guidance along the way,"*

Technical expertise

The IT manager and the consultant had technical expertise though it was not very important for their roles in this project. Technical understanding provided a base for their assessment of current and possible technology options.

The most technical role was played by the IT support, who was an IT analyst working in a team of three people who look after the service database, doing upgrades and testing. Like everyone in ISD he was PRINCE2 trained and had managed a few small projects. The IT manager saw this project as being a way for him to learn more about the service, and so allocated him the job of supporting the consultant. This role was semi-formalised in the PID:

> *[The consultancy] will undertake informal skills transfer to a member of the IT team and he will provide onsite assistance and follow up to specific queries.*

This clause indicates the practical need for the logistics role, but also indicates that the IT support gained an opportunity to observe and learn in an informal non-participative capacity how a consultant works.

Business expertise

The IT user, despite being on the service side had an IT background in project and account management. She considered the final report as demonstrating the consultant's contribution

to a clear and logical financial analysis. She averred that the consultant could listen to everybody she spoke to

> *She had the ability to listen to everybody she was speaking to who were completely different people and take what they said and put that into a cogent set of requirements that everybody would understand*

Social service participants provided business experience. The consultant collated that experience from around twenty users who ran the social care service using this out-of-date IT system.

Consultancy skills

The consultant's contribution was through interpersonal skills that she used to elicit information from key parties, and technical skills that she used to analyse and synthesise that information. Because she was confident, she was able to say what she thought even if people might not necessarily agree with it. She did not have an ego to protect (Sturdy, 1997a). She asked people what their priorities were and helped to ascertain priorities. She spoke to the incumbent supplier and toured the market to identify competitors. The resulting report was a synthesis of options for key IT systems to match user priorities together with a financial analysis of their cost, implications and time scales. It was perceived as an objective report, not biased towards any internal department. That is interesting because she was creating engagement between key parties by providing a shared document that would help them engage across their functional boundaries.

The consultant proved to have flexibility to match her interviewees' values and styles. On the other hand, the consultant did not span the boundary between herself and the IT support.

Procurement and negotiating skills

In case C, the IT manager and her business counterpart put some effort in to identifying and procuring the consultant, along with agreeing the level of management of her services.

The IT manager and the senior manager initiated the project, and set about procuring a suitable consultant. The procurement process involved the IT manager checking potential

consultants from the chosen consultancy organisation. A trigger for picking this consultancy was that the IT manager and the service programme manager had read an article from this consultancy about service strategy. They had originally been interested in another consultant from the same consultancy because he had written this relevant paper. The article had two authors, so initially they asked to speak to the primary author but on meeting him, they doubted his ability to show himself to be independent because he already had opinions about the council's existing supplier, and he gave a poor impression.

He seemed to be verbose without substance and a bit passive aggressive.

He lacked credibility, and implied a less independent view of the existing supplier than was required, so interviewees might not respect him, particularly the incumbent supplier. Therefore, they looked at his co-author, liked her approach and contracted her.

An interesting thing about this project is that its objective was to provide information that the social service could then use to negotiate new procurement from the technical supplier.

5.4.4 Emerging behaviours

Sharing

In this case, there was evidence of sharing information, tasks, values and rapport. There was also evidence of *not* sharing skills and rapport, and of the deliberate choice of an un-sustained relationship.

The IT manager shared information about the project inception, running and outcome with participants, both within the council and with the existing supplier. To some extent, she spanned the boundary between the business users and the consultant. The consultant's interviewees explained to her their perception of social services, their needs, wants and priorities. She then brought people's different priorities together, gathering the information into one coherent document that everybody could understand and agree with. Thus, the choice of new system became a shared task.

> *She just got everybody's mindset on the same sort of playing field, the same level so that all the management were thinking, […] these are the options, they could all see what they were. [IT user]*

The structuring of the final document was not a shared task but the responsibility of the consultant, who built up such a rapport with the IT manager that the IT manager trusted her to manage it.

> *She had built enough trust with me and [] her approach was clear enough to me that I could very easily buy into the yeah, something is going to come out of this and you're going to need a bit of flexibility to do stuff and no, I can't be bothered to micro manage your time either*

To the IT manager they appeared to have similar views on things, "*or if we didn't she was really good at making me think I had, that we did",* and the consultant was pragmatic and direct, *"so we were well suited to each other."* These two women built up a rapport between them. Building rapport meant that the IT manager trusted the consultant and was willing to take a little more risk on the scope and flexibility of the project.

However, the consultant and the IT support had little shared experience in common not even age or gender.

> *She was a lot older than me, so there was a generation or two, gap there.*

Although the task and the aims were shared, and although they were in the same space listening to the same people, their minimal conversation did not create a rapport between them. The consultant's career profile indicates that she had been working in this area of public service for decades whereas the IT support had been working on it for only two or three years, so they had different knowledge bases as well. They exchanged small talk about her journey and problems getting a parking space, but the IT support had no rapport with her. This is interesting because the consultant had no need to obtain knowledge from the IT support, merely to use him for logistics and he had no power to ask her to do anything, as she did not report to him.

The consultant otherwise appeared able to build rapport with anyone she interviewed. For instance, the IT support reported:

> *There's one particular guy who's head of service provision, and he's a quite laid back kind of guy and was cracking a few jokes, and stuff, and she was quite happy to laugh along.*

The consultant planned rapport by ensuring that the IT manager briefed her on personalities and departments before she interviewed people. She wanted the IT manager to go through the list of names, explaining what each person did and how they might react:

> *How they might be and how I suppose where they were coming from, how they might react to stuff.*

This council's employees tend to criticise the use and cost of external consultants to do a job that arguably could be done internally. However, internal office politics might influence potential shared aims, and the commissioning IT manager wanted the results of the review to be perceived as from an independent and objective perspective. Thus, she argued that the review needed an independent external consultant who could be perceived as an independent voice, without having shared relationships to sustain within the council.

Key parties could and did share place, time and material objects. They also shared in the development of the final report, which is the shared object of most interest. It is interesting because it drew together the experiences of the diverse parties, helping them to see each other's perspectives. The report became a cross-boundary object that allowed cross-boundary experiences. Boundary experiences are "shared or joint activities that create a sense of community and an ability to transcend boundaries between participants" (Feldman and Khademian, 2007: 317). The report manifests shared knowledge across functional boundaries and helped to create high levels of connectivity between key parties.

Sense making

Sense making of expectations is needed because people may have unspoken assumptions, thus making different senses from each other, so there is a need to negotiate meanings to surface assumptions. Sometimes a consultant appears challenging when trying to surface assumptions, but this consultant did not have that effect on the IT manager.

> *She was very clear that she wanted time with me first to understand what I wanted before she went off and talked to other people. So the first session that she had, she asked me a lot of really good questions about what I thought, what are my preconceptions already, what I wanted to achieve. [...] I'd given her a lot of names and she wanted me to go through each of them and explain what they did, how they might be and [...] where they were coming from, how they might react to stuff.*

In contrast, the consultant did not negotiate any meaning with the IT support, which left him feeling awkward as he expected to learn something about her and what she expected from him.

The consultant was qualified and skilled at interviewing (Kvale, 2007: 81), knowing the topic, a master of conversational skills, structuring the interview and clear in her questions. The IT user and the IT support did not express recognition of the subtleties of the consultant's interviewing skills that built rapport and elicited meaningful information, but the IT manager was aware of her interviewing skills.

The evidence of sense making is in the outcome, a report that satisfied a score of people with multifarious priorities.

Adapting

The consultant's adaptability was important to a time-bounded project, which was only two days a week. She had to select and prioritise commitments and fit them in. She asked the IT manager the best way to approach somebody, and apparently adapted her approach to them depending on their knowledge and the kind of contributions they could make. The IT manager contributed a list of names of people that the consultant should interview, and then together they went through the list discussing how to approach each. Because the IT manager contributed her knowledge of particular people, the consultant was able to adapt her approach to each interviewee. For example, she might suggest that if someone were a senior stakeholder, then she would need more time.

The IT manager adapted her approach after advice from the consultant on how much contingency time was required as an alternative to micro management of tasks. She trusted the consultant's advice that she was going to need to build in flexibility.

> *She had built enough trust with me and her approach was clear enough to me that I could very easily buy into [] this []. That challenge happened quite well up at the beginning and so we did build extra into the funding for it.*

So the IT manager adapted because of trusting.

The IT support wanted to practise his interview skills but adapted his behaviour with the consultant after talking with the IT manager.

> *The first session he joined in and started asking questions as well and picked up that [the consultant] wasn't quite so keen on doing that so I advised that he's probably better off watching her] in action and minimising his questions but watching how she does it. So that was something new for him, that actually his role was, wasn't a free-for-all, you know. She's got an hour, she's got to get a load of stuff out of people and move around in response to what they come up with and if he diverts them for his own education, then she's not going to get through it all. [IT manager]*

The informal skills transfer became passive skills transfer as the IT support observed the consultant exercise her skills. Her skills were well-honed, unconscious competence through tacit knowledge, and the IT support may not have recognised everything she was doing.

The IT support commented that he had learned how important the financial side was to the service. However, he could not totally leave his day job to support the consultant so when he found himself being "*bombarded with emails"* he escalated action to his line manager to explain the conflicting priorities.

> *She just helped me word the emails back to her to say, I was very sorry but I wasn't going to be able to do, or provide assistance. They would have to wait until the next day, or whatever. We had to be quite forceful, actually, at one point. I understand she was under pressure.*

The IT support did not learn as much about consultancy or interviewing as he or his IT manager might have liked, because the consultant's remit gave her insufficient formal reason to teach the IT support those skills. Although it was in the PID, the skills transfer was to be 'informal', it was not listed as a formal deliverable in the PID so there was no time and nothing to incentivise the consultant to do more than have him there observing, and his learning was passive.

5.4.5 Interactions

Analysis of each component and interaction might show if the model shows effective behaviour.

Environment and sharing (interaction 1)

IT manager & consultant shared time and the IT manager's knowledge of people in order to anticipate interviewees' reactions, and potential knowledge of the social services system before interviewing them.

Bringing in the independent consultant influenced reactions to the final shared report because the services departments reacted politically to ISD:

> *If IT did it, it would be "we're not going to be driven by IT systems," so I think that independence was good. [User]*

Participants and sharing (interaction 2)

The consultant and IT manager shared knowledge, but the IT support never did.

> *We didn't ever really get time to sort of sit down and catch up with each other*

Expertise and sense making (interaction 3)

Knowledge of the social service and its use of technology transferred from the expert service users to the consultant, who collated it to make sense of diverse perspectives.

Sharing and sense making (interaction 4)

The consultant was the catalyst for users to make sense of their options, combining and understanding each other's perspectives. Clients individually explained use and requirements, and then together with the consultant as mediator, agreed key options.

> *It just took that outside view to challenge the people and say, 'why do you want it?' and… to go across the whole view [IT user]*

Sense making and adapting (interaction 5)

As the consultant made sense of what her first interviewees shared with her, she adapted her interview plans for her later interviewees. The consultant adapted the final report for the specific requirements of a client director, so she would not have to put so much time into reading and making sense of it. Participants adapted their perspectives because of the report.

Adapting and expertise (interaction 6)

The consultant identified her primary client, took time to learn their requirements and then made the effort to find out how their interviewees thought and how to relate to them. In fact, in case C, the IT manager commented that she could have interacted more to obtain more value from the consultant through knowledge transfer to the IT support.

The strongest interactions (1 and 4) reflect participants' dedication. The weaker interaction 6 between adapting and expertise reflects the paucity of knowledge transfer from the consultant to the IT support.

Writing the report that arose from participants' shared knowledge was important in this case study because it allowed participants subsequently to adapt their individual perspectives to a shared one.

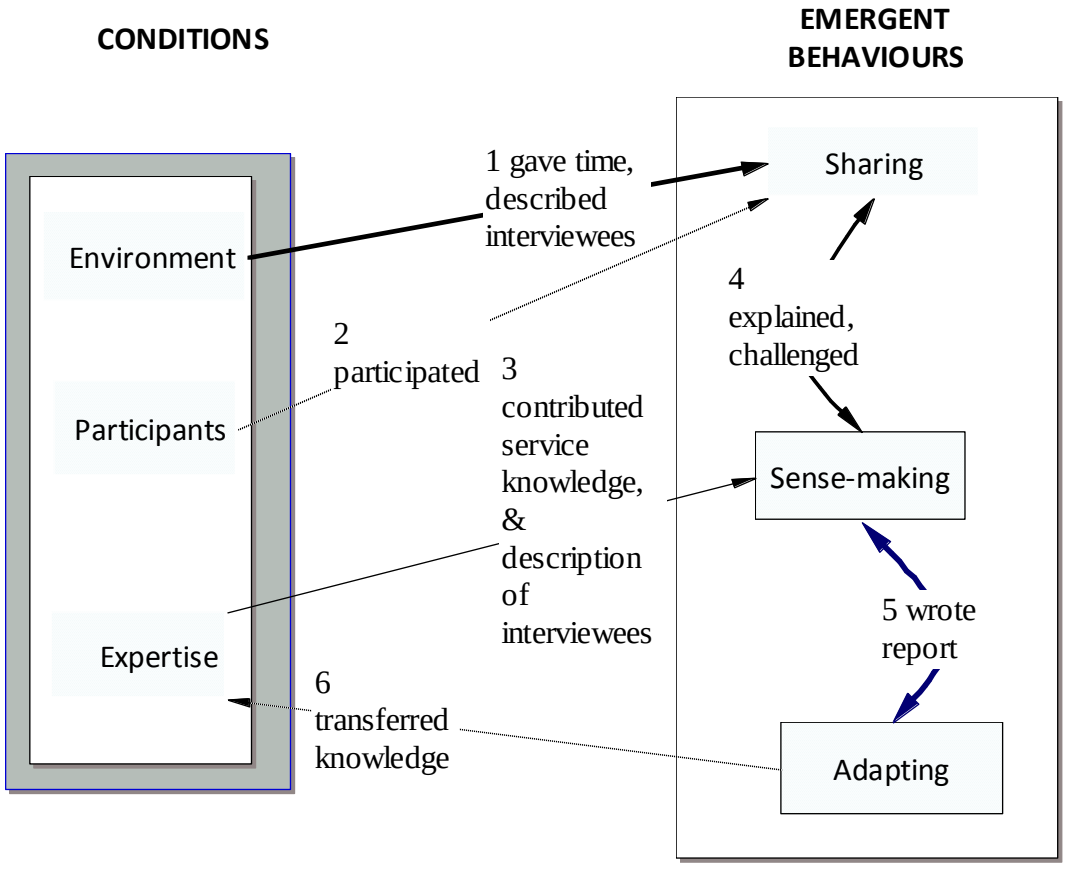


Figure 5-13: interactions in case C

5.4.6 Value

This section examines the interactions that produce value from the emerging behaviours.

Interaction 7: how did sharing produce value?

In case C, the consultant avoided being micromanaged because sharing knowledge of performance meant the IT manager trusted her. Other participants trusted her independence as an outsider, which helped to create shared values amongst the client parties:

> *She brought a great deal of value in getting on one piece of paper everybody's requirements [Case C, IT user]*

In case C, the relationship closed the internal debate between people who cared about how they used the system. The consultant's behaviour and her report created value by bringing key parties together to share a common perspective.

Interaction 8: how did sense making produce value?

Value accrued from increased knowledge of each other's perspective, so that participants discovered a common perspective.

> *"She just got everybody's mindset on the same playing field" [Case C, IT user]*

In that way, the consultant improved clients' knowledgeability by enabling them to acquire understanding of each other's perspective, in order to agree their commonality.

Interaction 9: how did adapting produce value?

It is not clear what adapting behaviour produced value, but value in adapting came from the iterative interaction between sense making and adapting to understand each other's perspective to find a common perspective. Adapting that transferred knowledge was useful, but the knowledge transference seems to have been from the client users to the consultant, rather than creating new knowledge within the organisation.

Figure 5-14 summarises the value gained from the emerging behaviours.

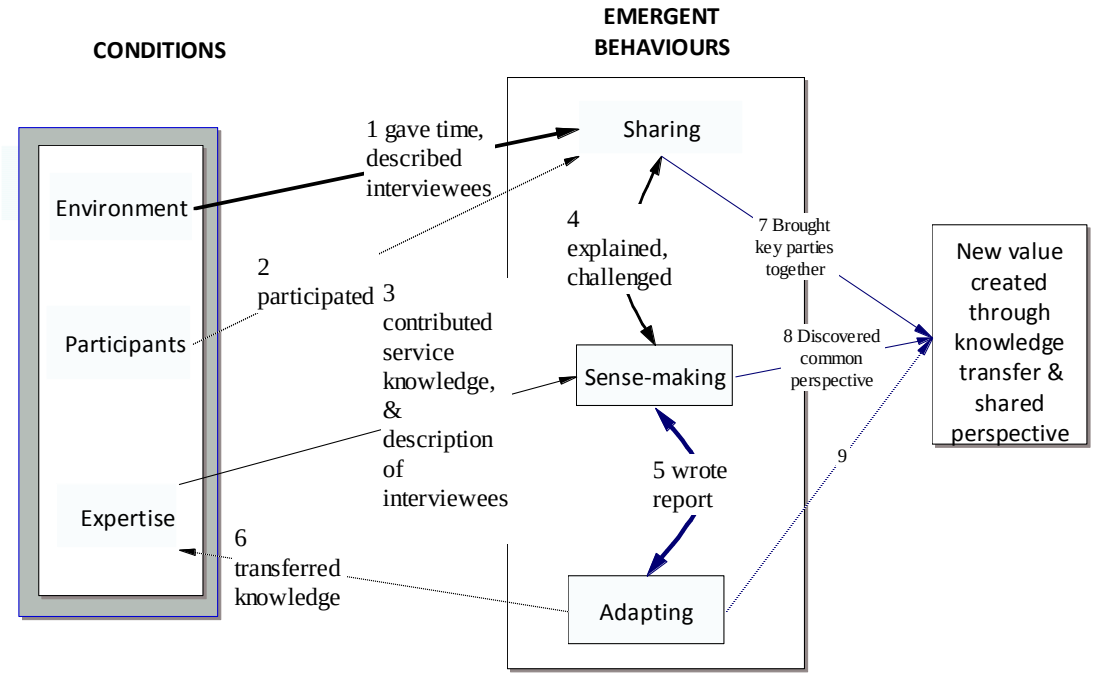


Figure 5-14: value in case C

Again, value from engagement is not obviously tangible, but the project finished on time, to budget and almost within scope. The value that does not accrue is the knowledge transfer to the IT support, because the consultant did not adapt her time, attention and commitment to this. The value that did accrue was the shared common perspective amongst business participants, and trust between consultant and participants. There was a "paradigm shift moment" as all the users connected to a common goal (Block, 2001: 316). They connected to a common goal because they made sense of the material document that the consultant wrote. Agreeing to the document meant that the IT manager then had the other participants' support to negotiate with the incumbent supplier and that negotiation led to a saving of hundreds of thousands of pounds.

5.4.7 Summary case C

This short consultancy project provided the client with analysis of technical options. As in case A, the conditions were stable once the choice of consultant participant had been made. The emerging behaviours appeared iterative with the consultant as a central mediator who

helped other participants to make sense, so that her clients came to share a common perspective. Again, there seem to be cycles between behaviours and conditions.

5.5 Case D: discussion

This case in a central government department differs from the others. The shared business services (SBS) programme had been unsuccessful and the department had not proactively nurtured strong relationships with its suppliers. The case explores how the programme was turned around. Consequently, this section is slightly different from the other cases; it not only analyses what the relationships were, but also how relationships changed, what behaviour helped that change and how lessons learned on the shared business services programme were not only applied on another programme but also led to the creation of a new and innovative approach to contract management.

5.5.1 Environment

Place

The majority of the SBS team was co-located in a modern building. Offices were open-plan with space for over fifty people in a section. Central facilities including lifts and communal coffee making areas divided each floor into separated sections. Smaller meeting rooms were available but unlike the open-plan areas, had no natural light. In the open area where some suppliers would hot-desk, notices were left from their parent organisation reminding them of security and their behaviour as guests of the government department. Being co-located allowed access to social events advertised on the social notice board, so was important for informal contact.

Informal communication was important to interviewees, who believed that the most successful communication was personal interaction. Personal interaction was possible, but it was up to the key parties to use existing facilities. For informal meetings it was possible to see across the open plan spaces if people were busy or free. People might meet in the corridor, in the coffee making areas, at supplier forums off site and at social events. They would have unplanned corridor talks, or arrange to share a coffee in the building's cafe. The material comforts of a cafe for coffee afforded an informal environment in which growing issues could be "*nipped in the bud*" outside the formal meeting. Accidental corridor

meetings were useful for informal discussion to play through options and focus on difficulties. Occasionally someone would suggest meeting off-site for a beer and informal discussion. The need for informal personal interaction was a lesson that an interviewee had learned somewhat painfully. He recounted an incident in which he had had an opportunity for an informal one-to-one discussion with one of the supplier people, but had turned it down because he wanted to bring along a colleague. When they met in a formal situation, supplier side brought three people and "*positions were drawn*" for a somewhat frosty encounter. The interviewee remarked ruefully that that encounter was a learning experience.

Suppliers and client met formally and informally. For formal meetings, they withdrew to meeting rooms, where they shared agendas and minutes.

Electronic environment

BlackBerries that were supplied to government employees, like email, afforded an audit trail.

> *The way we work is email and it used to be telephone, everyone emails everybody now, and there's a certain reliance on email. There's also a bit to cover yourself if you're doing things so there's an element of that. [Projects leader]*

People relied on email rather than telephone, using the permanence of email to account for their work and cover themselves.

In summary, the situation affords communication by creating opportunities for individuals to get to know each other and to work together. However, this case study demonstrates that it is important to encourage informal communication.

Artefacts

In the IT context of this case study, boundary objects included user requirements, plans, agendas, reports and slides. User requirements have to be specified by eliciting and analysing the client's wishes. The requirements analysis process culminates in requirement documents that should explain unambiguously what the new software is expected to do and is often a contractual document. These requirements are then used to develop models,

interfaces and detailed designs. Normally, the user accepts these towards the end of development, so user acceptance tests should match the requirements specification. However, in this case, the user could not, or would not state requirements or the supplier could not elicit and analyse the users' wishes, and then the user did not accept the results.

At the start of this case, plans for delivering the system existed; the supplier had plans and the client had plans, but they were not mutual plans; they were not aligned.

> *"In June of last year, and there wasn't a single plan. We've got our own plan and they've got their plan. Well, I thought that's not going to work, is it, how do you know when you're going to deliver something together" [S-EL]*

Shortly after arriving, the account director from the supplier encouraged the supplier team with a slide set of values and behaviours, using that presentation to get the supplier team moving in the direction and behaving in the way that he wanted. After twelve months, he created a slide set to share with all parties. This slide set reviewed what the partnership had achieved, surprising people to realise how much they had delivered.

Other shared objects for communication included the procurement contract, PRINCE2 framework and project documentation, but initially not shared plans. These objects from formal meetings provided audit trails for accountability, which mattered to interviewees in this central government department because audit trails were mentioned more than in other case studies. Such visible and irrevocable action provides accountability (Weick, 1995: 158) because it is public commitment.

Time

In the first scenario of the case, for a long time key parties shared no or little contact time, and never shared informal time. This was typical of central government procurement, "let and forget" contracts rather than manage them to completion. However, later in the case a new Group Commercial Director (GCD) had arrived and was making changes to procurement strategy and contract management in order to achieve savings.

5.5.2 Participation

Governance

This central government project had a governance structure as indicated in Figure 5-15. This figure shows hierarchical authority and implies a structure of responsibility and accountability. A range of operational meetings covers various aspects of the service supplied. Change review boards meet regularly, and formally. Running alongside that, more informally, the stakeholder groups have contact meetings.

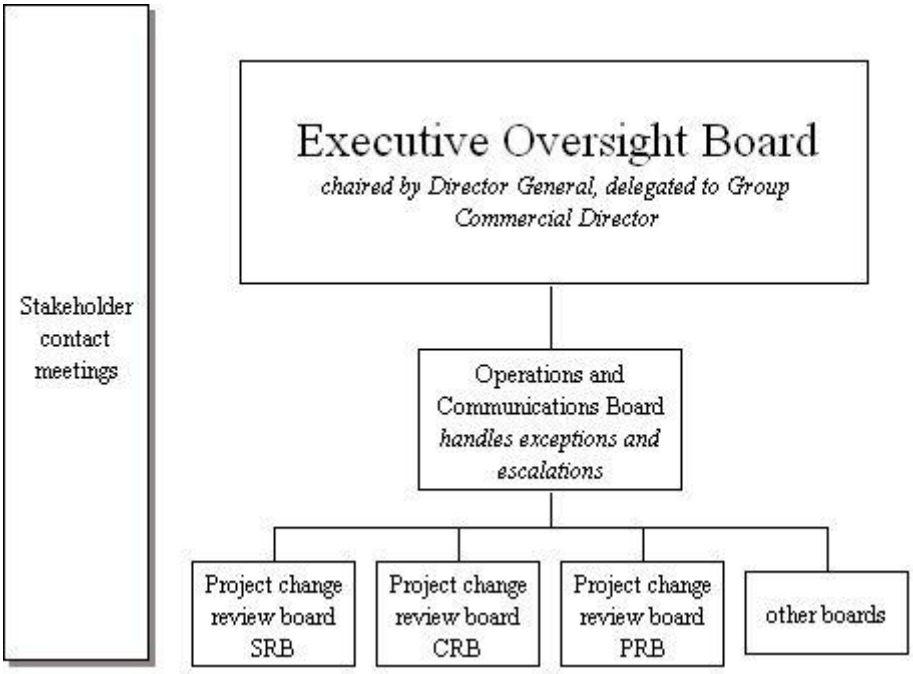


Figure 5-15: governance structure in case D

Such a figure cannot show who on the chart actively participated in the project, because it depicts governance not individuals. Evidence of participation comes mainly from interview data. This section will look at what is known about participants.

Participants

The previous section indicated key parties in this project. The following diagram at Figure 5-16 extends this by showing participants.

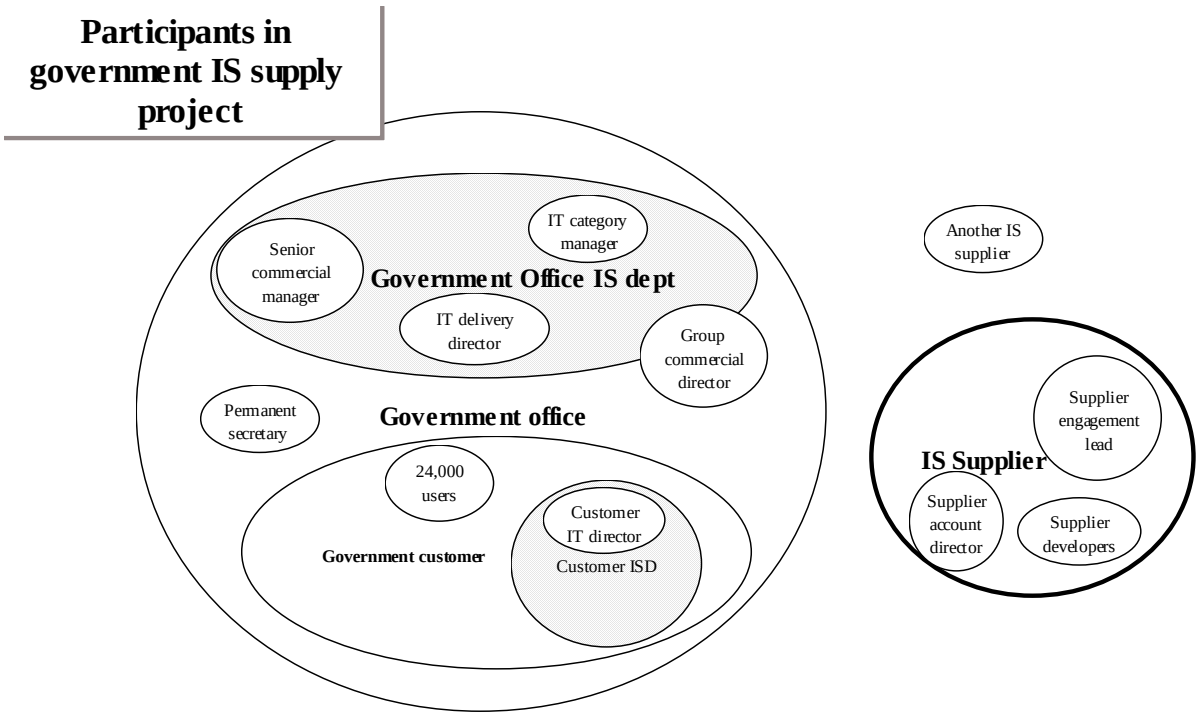


Figure 5-16: participants in case D

The figure above shows the government offices information systems department (ISD) and the department that formed its customer service programme, which also has its own ISD. An important participant was a group commercial director (GCD) who came to the shared business services program around 2008 to instigate change. Outside the government system are the two suppliers for this collaborative IT procurement and delivery project. One supplier managed the system and another supplier provided functional enhancements and systems integration. The diagram shows some individual participants. Overall, this is a complex system of systems, in which many people participate.

Business participants

The government customer, represented by the customer IT director included thousands of end users who are public servants using this shared back offices services system. The customer IT director participated in regular meetings with ISD and the suppliers, though he admitted to using some meeting time to catch up with his emails on his Blackberry. Observation of such a meeting revealed that the business users sometimes '*dithered*' about their requirements, which slowed down implementation progress.

ISD participants

Problems of participation initially were several. First, the use of the waterfall approach did not allow iterative development. Secondly, ISD participants commented that there was "too much going on," meaning that there was and still is a lot of work. This is an endemic hazard in the public sector as new political initiatives happen before completion of earlier work, and a similar comment was made in case C at the local council. Thirdly, the public sector culture was not one of performing and delivering:

> *We don't have that culture throughout the whole management chain [ITDD].*

External participants

The two supplier companies were external participants, of whom only one company provided interviewees for this research. The supplier account director suggested that the end user was meant to participate throughout the development.

> *Throughout the life of development, the client, the end user has been involved absolutely as an integral [S-AD]*

However, that might not have happened because of the development methodology used.

A common IT methodology is the waterfall approach where each stage of the IT project happens in sequence. Clients in this government department would state what was required of the system, handover the requirements statement and expect the supplier to get on with it. When the supplier asked for clarification, this was refused. Accordingly, many months were spent developing software with little or no further collaboration between client and supplier. When the software was handed over, it was not what the client wanted, which then required a massive amount of change to make the software do what the client wanted. Consequently, the go-live event was stressful with conference calls at three in the morning and the main release of software was compressed to essentials only.

Of interest was a technical change to participatory activities, requiring changing the IT methodology to one closer to concurrent engineering. Concurrent engineering allowed software developers and business analysts to write an outline requirement in a few weeks, and then go back to each other to comment on, elaborate and clarify requirements. Analysts

and developers could develop the software further and come back later with the next module. The new methodology encouraged articulation of requirements, which allowed feedback and knowledge creation. This change in participation is surprising in a government department where usually a contract assumes a waterfall approach because of the need to control and fix costs rather than have something as open ended as collaborative development, yet it seems difficult for this central government department to reconcile the formal PRINCE2 review framework with a concurrent engineering model. The change is also an interesting development because information systems development literature (Swanson, 1974, Keen, 1981) for years has advised that it is important to get user participation in development. If central government procedure prevents or reduces user participant in IS development by adhering to a strict sequence for user involvement rather than iteration, then it is hardly surprising to find senior managers also lacking in experience, skills or confidence to lead big IT projects (Nicols, 2009: 22).

Forgetting to include key parties in discussions hindered participation; regular not particularly formal weekly meetings happened between the client and the two suppliers,

> *"just to see what's happening and see if there's anything that we need to be worried or concerned about."*

Those meetings were needed to check the three were working closely together in order to deliver the service to the client's business customer. Such weekly meetings could handle something that might still be hindering participation where people from two of the organisations may be working together, but without the third organisation, who they had forgotten to include. Hence, lack of participation hindered sharing.

The map at Figure 5-16 is a static representation of the participants. The boundaries imply that each department has functional relationships between members of those departments. The project requires someone who spans those boundaries in order to exchange functional knowledge. In this case study, in the initial scenario there were no boundary spanners; the known boundary spanners of the second scenario included senior managers from both supplier and client.

5.5.3 Expertise

This section analyses what expertise participants contributed. In this case study, participants contributed management, technical and business expertise.

Expertise on IT programmes includes technical and management expertise.

> *On the ground, it's about application expertise, what the product can do and what it can't do. At a higher level it's about managing the programme and delivering on time [S-EL]*

The interviewees for this case study had leadership and managing skills, technical competency, consulting and negotiating skills, so the discussion is structured around these areas.

Expertise must be contributed to the project and the other and different skills of suppliers bring value.

> *"They bring value in a way that they have core competencies that we don't have. They have all the disciplines and the professionals who run that particular service that we need" [ITDD]*

The supplier's different skills complement those of the client, providing other than what the client can provide.

Leadership and managing skills

General management skills, leadership and persuasion skills were important in such a complex landscape. When top management was not using its management skills then lower tiers did not perform, as depicted in Figure 5-17.

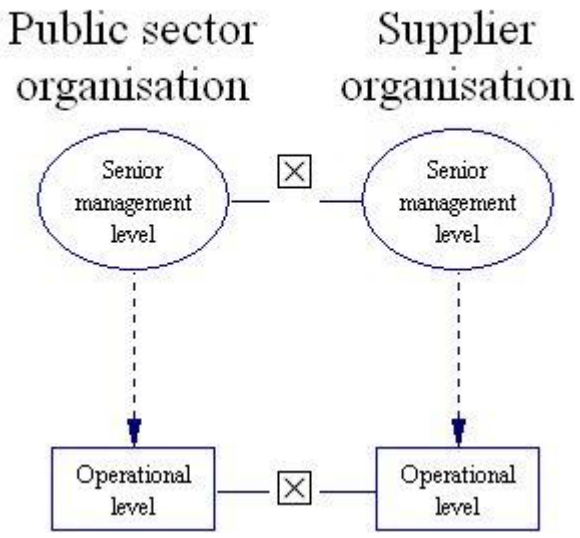


Figure 5-17: top management not engaged

Poor management behaviour filtered down and relationships were lacking at operational level as well. Managing down the chain was necessary in order to instil a culture of changed behaviour and values.

It's about pushing down that culture of strategic working [S-EL].

When the adversarial behaviour was getting to a point where people were not being productive, that behaviour affected the department's ability to deliver its frontline services.

Both sides had lacked management relationship skills or not practised them; they had to adapt their attitudes and behaviours. Before summer 2008, the client side had lacked understanding of how IT should support business objectives and were unable to contribute their business knowledge in order to create the user requirements. The lack of management and communication expertise by supplier X meant their operational people did not perform, or were not perceived to perform. Continuing like that meant the new contract would have been open to tender and gone to a different supplier.

The department started a transformation programme with the supplier when both sides' senior management changed in summer 2008.

The account director (S-AD) from the supplier saw communication as a loop that required setting an agenda, performing, and telling people what had been achieved. Using leadership skills, he sought, understood and valued the client viewpoint.

The new supplier account director understood the public sector and knew what he needed to adapt in his own organisation, to make it more agile and flexible for the public sector.

> *"Because of [the Account Director]'s understanding of the public sector, he knows then how to manage his organisation, get the best from them in the delivery of service to us." [ITD]*

It was not always feasible to deliver "*everything that you've heard coming from the client."* However, if a participant is bold enough to speak then agreement is possible.

> *If you're bold and go back and have an open and honest and firm discussion about that, and they understand your world in relative terms to their world, inevitably you'll come to an agreement. If you then follow through with action, then people start… well, your credibility starts to take shape. [S-AD]*

The account director demonstrated skill in managing expectations from both organisations. He talked to stakeholder groups, listening to their pressures and aspirations from a business perspective, and then set an agenda to change perceptions and improve delivery. Finally, he told people what they had done, what they had collectively achieved and how they had done it. This evidence demonstrates how the account director contributed and used his expertise.

Technical competency

Expertise has to be demonstrated by performance, and technical performance is the client's first requirement, the account director held. The supplier is brought in for technical skills that the government department does not have and does not need in the long term. The supplier has to perform, deliver something to the required specification and deliver on time.

This supplier on its web site describes its technical competencies as designing, building and operating IT systems and IT services for large-scale clients in both the public and private sectors. Its core strength is the delivery of IT management and outsourcing services across applications, data centre, networking and desktop environments.

Senior management active participation in the SBS project came after a difficult period in the relationship between the supplier and the client. When the new account director from the supplier (AD) arrived in summer 2008, two or three predecessors had come and gone in quick succession. The parties were in an adversarial relationship in which a ten-year contract was ending. To this incoming account director, his supplier team appeared lazy and complacent.

> *I'd found a team from the [Supplier x] perspective that were eight years into a ten year contract, that had sagged into a shape. [S-AD]*

The complacency displayed to the client as technical incompetence, because the supplier was slow to respond to requests for service. Discussion helped clients to understand what IT service could be delivered. For example, the account director explained different types of service as analogous to ordering a high-value car or a best value car depending on requirements.

> *[Account Director] can say to us, we can give you this which is a Rolls Royce and that will cost you this much pounds but I know, given your current situation, economic climate, you need this kind of thing, which is more a Skoda type thing, but will give you what you want. [ITDD]*

The comparison of cars, analogous to a comparison of a complex IT service, hence indicates that the IT delivery director is aware of and appreciates the IT competences that the supplier brings. Suppliers contributed product insight and programme experience to the monthly programme steering board, a forum for creating and sharing ideas.

Business expertise and skills

Client side informants understood the public sector very well; some had many years of working in the public sector. On the other hand, some senior managers had more recently joined the civil service and had consultancy experience as well.

The IT category manager suggested that the client side had changed behaviour, becoming more commercially aware, seeing the process as being value for money and an "*end to an end*." The 'end' was about the whole cost, so included quality, fitness for purpose and making sure the supplier was working to help the government department. Hence, this

expertise was about understanding both organisations' business drivers and goals, understanding the rules of the game and understanding people.

The previous lack of perceived performance by the supplier left a credibility gap that had to be put right so that the group commercial director could see it:

> *Then [GCD] could see that we were delivering on time and to budget. So we had built up a credibility there, so rather than just the credibility that I gave through talking about it, we had actually then gone and delivered [S-EL].*

Relationship improvement was based on performance. The account director warned that performance was essential.

> *"Our relationship would be nothing unless we performed. If I just got on with everybody and they liked me and we were still in a bad mess, we wouldn't be doing what we're doing. [S-AD]*

Achievement meant performance and performance mattered. Once the supplier had demonstrated performance and delivered, then trust could begin to build up between supplier and client, so for the account director, performance mattered more than friendly relationships. This pattern of expertise shows the people who successfully span boundaries are able to share knowledge usefully. For instance, the engagement lead from the supplier and the client general commercial director successfully spanned the boundary between their organisational cultures.

Consultancy skills

The supplier's engagement lead spoke about applying consultancy techniques to understand his client's aims and pressures, both professional and even personal or career aims.

> *I brought in an approach, which I think is a real consultant's approach, which is about listening to your clients. Rather than telling the client what they want to do, what they should do, it's listening to what their problems are and then see how we can work together. [S-EL]*

He appears to have integrated this listening skill in with other leadership and management skills.

Procurement and negotiating skills

There was evidence of procurement and negotiating skills from client and from supplier parties, who had had long negotiations on how to improve the supplied service, what performance was required from the supplier and what information was required from the client. The improved performance led to the opportunity to negotiate a new contract, which took some weeks and had been agreed only days before the researcher was allowed in.

5.5.4 Emerging behaviours

Sharing

Problems of sharing existed before the change of senior management. Client senior management had not felt they were getting the necessary responses, inputs, and behaviours from the senior team at [Supplier] and that had filtered down. When client senior management started an internal blog, the feedback about the supplier's quality of service was excoriating; not only was the supplier service bad, but also secrecy and confidentiality abounded. Participants had separate plans that they would not share with each other, so the programme plan was not one openly shared plan that could be displayed on walls for public reference.

> *The purpose of a plan is to let everyone in the project know what's going on so it cannot be restricted unless everyone who is a stakeholder in the project is allowed to see a restricted document. That's ridiculous. A project manager needs [unclear] it on a wall and puts it behind the project manager's desk and it's what they live by. You won't see those anywhere; people think, oh, that's a very [unclear] information, can't have that on the wall, that's going to show far too much. [IT user director]*

Even being co-located would not create trust because different cultures and difficulties in getting the same sets of values through the two organisations had hindered interaction. Lack of sharing meant lack of communication so key parties could not negotiate meanings and make sense.

There was also evidence that previously there had not been rapport, and so information and values had not been shared. For example,

> *The Commercial Manager […] reports up the business via a number of further managers making progress very slow in that every change is tediously negotiated*

> *taking weeks to agree which forces [Supplier] to work at risk and when this is highlighted, [Supplier] is seen as then being unhelpful. Agreements made at one level are not necessarily followed through commercially. [Email]*

The adversarial tensions and behaviour were so bad that the client nearly went to the market for a new supplier, but by the time of this research, there was evidence that information risks, tasks and values were being shared, and that rapport existed. Mutuality happened once supplier and client saw the partnership in business terms as a shared risk. Partnership required open and honest dialogue that included saying and receiving difficult feedback. The group commercial director (GCD), who was also the client programme director, and the supplier account director (S-AD) shared dialogue; that dialogue allowed trust to grow.

Dialogue included encouraging people to share knowledge of their business pressures and discovering what their career and personal aspirations were in relation to the business. The account director had come to this view years earlier through a particular work experience, where a client had insisted on getting to know him personally before developing the business.

> *The first general management job I had was when I was 33 I think, absolutely, you know, beside myself with fear. And, in an electrical wholesale business, factory and plant; all, you know, quote or cash business. On your own matey, get on with it. I did an account analysis of volumes, and noticed an account in Scotland, in Glasgow had gone down. I won't bore you with all the details. I phoned this guy and said why? And, he said, are you free tomorrow? So, I jumped on a flight and he picked me up from the airport, he drove me all over the place, showed me Glasgow, outside Glasgow, where he lived, the schools his kids went to. And, I'm really getting a bit… what on earth am I doing, and all day, he took me for lunch. And, then we finally got back to the office. "I've spent the day with you, you know me, you know everything about me now, or pretty much. I know you, I know about your family and I know the kind of bloke you are. If I want support from you, I'll pick the phone up." What a lesson in life!*

The AD used stories to share and explain his thinking. To get his staff to share his thinking, he used a slide presentation to encourage staff to perform to client expectations.

> *A line I had that shows a pedestrian sign on a signpost from bottom left corner to a formula one racing car [shows] the relationship to get to be technologically advanced, innovative, fast, high velocity, all those good things that perhaps is represented by that image.*

The AD learned that paying attention and being interested in people helped build a trusting relationship that allowed mutual risk. In this case, to start that trust, people had to get to

know each other through personal interaction and talking informally. Interviewees said they would sit down to talk, having formal and off-the-record discussions, talking openly to each other. For example, before taking big risks, the supplier engagement lead invited the group commercial director to chat informally over lunch to see if they could work together. By getting to know each other informally, they found they had similar backgrounds and age, so they knew they had something in common, which made it easier to trust each other.

Trust is needed when risks become mutual (Huxham, 2003) because trust allows self-reinforcing behaviours of sharing and sense making. The client was asking the supplier to take some big risks to deliver this programme. The supplier was willing to take unusual risks once a trusting relationship existed. Mutual risk required senior management engagement and trust.

> *What really makes these types of relationships work, because I'm dependent on [Supplier] to deliver a service, is the trust. [ITDD]*

Having something invested in the project seemed to increase willingness to contribute. The two suppliers and client invested time and effort in the expectation of gaining from good relationships based on openness and honesty. All three parties had invested in the programme, having some reason to want to make it work:

> *All three parties had some skin in the game and some reason for wanting to make it succeed that led to some very good collaborative working between the parties*

The phrase 'putting skin in the game' means investing something and risking losing a bit in order to win together. Investing in relationships meant they were able to move the contracts forward to something innovative whereby the two suppliers agreed to work collaboratively without the need for the government department to manage that work. That collaborative working required that suppliers pooled capabilities and expertise in return for taking up an option to lengthen their individual contracts, that is people reciprocated (Cialdini, 2004). Collaborative working on IT systems and services has realised efficiency savings through improved communication, relationships and hence improved performance.

> *[The Government Department], you know, will save 25% off of their IT spending because of that deal, which is in excess of the Operational Efficiency Programme expectations [S-EL].*

The philosophy has expanded to other programmes in the department.

The engagement lead (S-EL) indicated how supplier and client together contributed to delivery, depending on their different expertise.

> *We put a programme together, myself and [GCD] in which [Supplier name] would take on the infrastructure and would take on implementing the application, but the [government dept] would very much take on the business change element, because it's only the employer who can change their employees, so we can't do that. We can facilitate and give tips, but we can't make the change happen, so you have to have this collaborative approach [S-EL].*

As an example of a collaborative approach, the government department had a budgetary issue and asked the supplier to help cut costs. ISD had a team of twenty contractors who had a lot of knowledge. Normally they would come under the supplier's control and management, so there would be a fee of 15% across nine months to the government department. However, if the government department paid their invoices then the supplier did not have to add 15% on. The supplier was prepared to do this only if it was clear that supplier and client could work together and understand each other otherwise it was a risk that the supplier was not prepared to take.

> *Because I could have said that and two weeks later, [GCD] and I didn't have a relationship, and they were doing their own thing and I couldn't control things, and the contract was all in our lap [S-EL].*

Managing mutual values all the way through each big organisation has proven challenging, let alone across the organisations, remembering that a second supplier is also involved. Hence, to get the same set of values and understanding of where the relevant organisations needed to be senior managers had to share observations.

> *If I see things that I feel aren't matching what I feel his values are, I will bring it to his attention, and he does something. Similarly the other way [SCM]*

The starting point in some areas was the same; the organisations came with shared values even if they did not know it until they started to listen to each other and learn from each other. One interviewee remarked that some of the values that supplier had were "*absolutely*

the same as our own." Listening was "*about finding what was key for each party and aligning with each other*." Each party shared a need to deliver good service to their businesses and seeing that as commonality, they found it easy to align. When everybody aligned, trust developed and sharing increased.

Once everybody was aligned, and had relationships based on accountability, transparency and trust, the supplier built up creditability and all parties could develop mutual ambition. People could move from their left or right positions to the negotiating '*middle ground'*. In this situation, people accepted a competitive even slightly adversarial relationship, provided it was open. The improved competitive relationship led to the government department being able to negotiate an improved service, and the supplier could increase revenue, so all parties benefitted.

What also demonstrated sharing was having a shared plan, a plan that the key parties had not shared until they had built mutual commitment. Then they brought technical, functional and business change teams together to agree and deliver a single plan in both the government department and the service centre.

The entry form for the supplier award explained the success of the programme:

> *was due to the level of trust engendered between the [supplier] programme management team, the [government dept] programme director and the [government dept] programme steering board, which resulted in a level of collaboration rarely seen in the public sector and with a total absence of any blame culture.*

Other evidence from interviewees also suggested that there was no longer a culture of blame.

> *We are much better placed and I understand where I fit in this and it's not a cosy relationship and it should be full of the right competitive tensions but they should be done in such a way that are helpful [ITCM]*
>
> *Partnership in business terms is worth a shared risk [AM]*

This case study shows that shared risk and trust is part of the sharing component of engagement. A balance of trust and risk is needed, first building trust by sharing and getting to know individuals through personal interaction and identifying shared values, building credibility and displaying reliability.

Sense making

The key parties to the SBS project had earlier in the project apparently not shared values. Alternatively, they had not realised that they shared values because they were not communicating with each other. That lack of communication also meant that the client was not explaining requirements clearly. In IT work, the user has to tell the supplier what the requirements are, but if the user cannot express the user requirements, it is hard for the IT supplier to work out what is required, and even harder to deliver. This government client had problems expressing its requirements.

> *The [Government Department] wouldn't, couldn't articulate what they wanted us to do. They couldn't state their requirements very well, and without stating requirements then we don't know what we're delivering, and it's quite likely we're going to deliver something they don't want [S-EL].*

The following story tells of a problem of a delivery that did not meet requirements. A scanner had recently been installed but was not doing what the client wanted, so supplier representatives met with a client user to investigate. The client arrived with a 'normal' document to scan. It was 400 pages and took 50 megabytes of data. This was the average size of documents for this business, and well above normal expectations. The analysts had not realised from the requirements, or it was not in the requirements that the average document was so huge.

> *The non-articulation was a hindrance, certainly, so was the fact they couldn't say this is what we want. Then it became difficult, because whatever we guessed was what they wanted, they'd say that's not what we want. So they could very easily say this is not what we want, but it was very much harder to say this is what we want [S-EL].*

To get round this problem of non-articulation, supplier and government department had to create networks for sharing, and build structures that facilitated cooperation, to communicate problems and sort them out. The new group commercial director and account director brought people together to thrash out requirements. It transpired that one of the issues was that the government department had a number of different people, mainly contractors, who had different points of view, with no single aligned view of what they wanted to do.

Achieving successful outcomes required formal discussion, but also off the record discussions. When both parties know what they need to achieve they can "*sit down and talk*" to find out what "*is key for each of you and aligning that"* [ITDD]. For example, an interviewee mentioned that his next meeting was in the cafe to talk something over informally with someone and once he had "*sounded him out*," he could move his plans forward. That dialogical interaction allows negotiation of meaning.

Problems of sense making came from the earlier lack of sharing, which once overcome allowed client and supplier to align their understanding of value for money. For the client side, value for money had earlier been absolute figures rather than aiming to obtain the maximum benefit for the resources available, taking account of the mix of quality, cost and fitness for purpose, timeliness and convenience.

Adapting

Both client and supplier had to change behaviour. The client had to adapt from an adversarial position to being able to work collegiately to get output, managing programmes and delivering on time. Delivering on time meant deciding user requirements and sticking with the decision. When an IT product is off-the-shelf, the public sector in general, and this government department in particular tends continually to change it, but without a business case for changing it.

> *Where public sector people get particularly bogged down is if they buy a commercial, off the shelf product, which they are supposed to adapt to, and instead they adapt the product to them [S-AD]*

A philosophy of IT change with business case support had to be imbued into the culture of the government department.

> *You cannot be continually changing your mind about what you want this product to do. So it's a programme philosophy, really, of no more change. [S-EL]*

The supplier needed to use senior management expertise to change client behaviour and philosophy.

However, a story of producing letters for Human Resources (HR) demonstrates the supplier's versatility and willingness to adapt to client needs. Despite a design freeze, the client identified issues with the text within HR letters that the system would send out to employees during employment events. These issues were identified so close to a release date that they could have jeopardised the release. The contract meant that the supplier could justifiably have held the design freeze and continued to deliver what was agreed. Accepting late changes put the release date at risk, which could have had an impact on the credibility of the programme. However, the trust and shared understanding of the importance of delivering the right solution on time meant that the supplier could sanction diverting resources to this issue, to resolve it.

The key parties put together a united front to deliver this release on time – an instance of reciprocally adapting. Case D had evidence that in the initial scenario, when the supplier did not make the time and effort to demonstrate performance, the client perceived poor delivery. When the supplier changed behaviours and made the effort to gain credibility through improved performance, perceptions changed and relationships changed.

5.5.5 Interactions

The next stage of the analysis is to examine the components and their interactions.

Environment and sharing (interaction 1)

In case A, the plan was always open and visible, whereas in this case D, in the first scenario, the clients had a plan and the two sets of suppliers each had separate plans. Consequently, there were three plans with separate milestones, rather than a single combined plan with mutual milestones. Government documents can only be shared if they are not marked restricted, and the government plans were restricted to the government department, and suppliers argued plans revealed intellectual property.

> *The purpose of a plan is to let everyone in the project know what's going on so it cannot be restricted [IT UD]*

Plans provide boundary objects to share between participants.

> *How do you ensure your plan and their plan links up? And there should be milestones coming through the two. [IT UD]*

In the second scenario, participants linked plans, first through participants talking, and then suppliers demonstrated credible performance, which opened honest discussion and started trust. Trust allowed participants to share risk.

> *We built up that mutual trust, which meant that if they were going to get us to do this, it meant giving up some revenue. [S-EL]*

The participant organisations began collaborating in a way that is "*extraordinary"* in the public sector, such as the story about the team of contractors at page 185.

Participants and sharing (interaction 2)

In order to make sense, suppliers had to understand user requirements before they could deliver the IT, and users had to understand what knowledge the suppliers were looking for. Participants had to contribute timely and sufficient but not too much information.

Participants also realised the value of informal talk in informal places.

> *I'm just going to meet somebody for a coffee now to talk about - a business process change - which rather than email him I'm going to talk to him about, and once I've sounded him out I'll send him an email [category manager]*

This demonstrates a sequence from sharing time, space and talk to making sense through 'sounding him out' and then adapting by sending the email.

Expertise and sense making (interaction 3)

In case D, business change happened so often that it was difficult to pin down and stabilise requirements.

> *You're trying to hit a moving target because business requirements are changing all the time [ITDD]*

This shows that although a frequent perception is that the core of the "consultancy contract is the transferring of expertise from the consultant to the client" (Block, 2000: 27), sense making requires sharing expertise in both directions in the client-consultant relationship. Expertise in the form of business knowledge must transfer from client to consultant or IT supplier, or else the consultant cannot do the job.

Adding knowledge helps to make sense. However, adding more to the mix hinders with too much information.

> *We had a requirements document that was about 5,000 pages. We asked them to design a car and what we should have produced, […] was a glossy brochure that you get when you go to a showroom. What we actually produced was the microfiches that they use to look up parts. "There you are." No, that's not actually going to help, because no one can get that document into their head and no one can understand it. [Case D, ITDD]*

The client needed to know how to share its knowledge and how much of it to share. Experiences like this acted as cues to allow people to make sense retrospectively (Weick et al., 2005: 51).

Clients contributed knowledge of the organisational culture to work in and supplier management used listening skills to

> *understand your world in relative terms to their world [S-AD]*

Sharing and sense making (interaction 4)

The department blog provided a boundary object to share discussion between client participants. It revealed an ongoing pattern of events, confirmed dissatisfaction with the IT supplier's service and allowed the client stakeholders to make retrospective sense of the situation.

Case D participants started by talking, then built up trust, then began to share, building trust incrementally over time (Vangen and Huxham, 2003). Before sharing, people had willingly and consciously to get to know each other. That meant they had to meet. By meeting, they had dialogues that demonstrated their expertise to contribute, perform and deliver, allowed knowledge creation and exchange that allowed them to understand each other's language and values. By learning each other's language and values, they realised what their mutual values were. Then they could agree mutual aims and contributions to the programme and begin to trust each other. Trust allowed them to take risks when they recognised their work as an investment.

Sense making and adapting (interaction 5)

Time and effort is important for adapting, but sense making is time consuming and iterative, and years had passed on this long-term programme while little apparent effort had gone into sharing and sense making so no key party had the wherewithal to adapt.

However, in the second scenario, the supplier had adapted speed and quality of performance, and the client had adapted understanding of the quality of business information that was required. Key parties demonstrated increased commitment. Commitment from the supplier was demonstrated in the account director's exhortations to and praise of his team of developers.

Adapting and new interactions (10 and 11)

Commitment from the client was demonstrated in manipulating the environment to allow flow of comments (e.g. the blog). Further manipulation of the environment through innovative contracts allowed the new form of collaboration. Those actions suggest the existence of the extra connection 10, as in case B, that changed the participants, and connection 11 that changed the environment by introducing the blog and the new contracts.

Adapting and expertise (interaction 6)

In all the case studies, the consultancy or supplier side nearly always initiated interactions. Case D, scenario 1 is an exception, when the supplier did not make the time and effort to understand their client's norms, nor to demonstrate performance, the client perceived poor delivery. The long-term relationship went wrong before the client initiated new interaction with the IT suppliers.

Figure 5-18 is annotated to demonstrate the missing interactions and poor working relationships in the first scenario for case D.

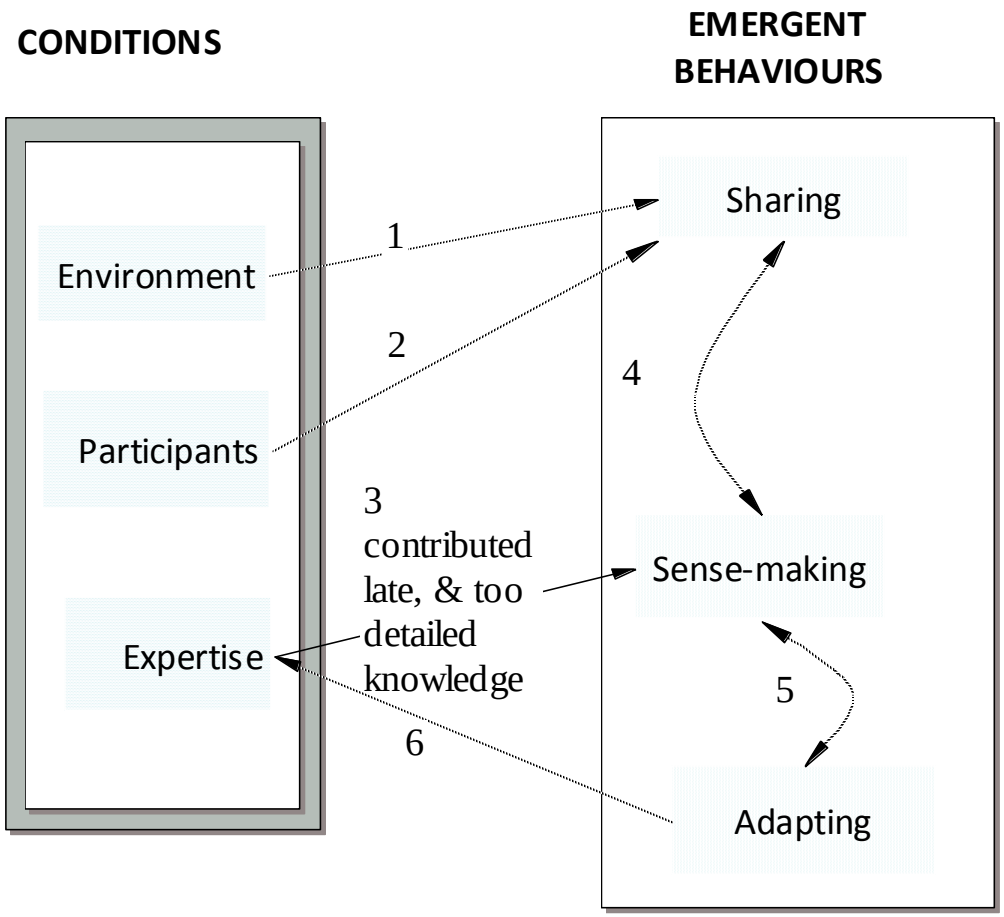


Figure 5-18: interactions in case D, 1st scenario

When the supplier changed behaviours and made the effort to gain credibility through performance, perceptions changed and relationships changed.

Figure 5-19 for the second scenario demonstrates work that participants put in to sharing, sense making and adapting. New links form feedback loops between components. In comparison to the first scenario, there was evidence of interactions, and interviewees affirmed better working relationships.

In case

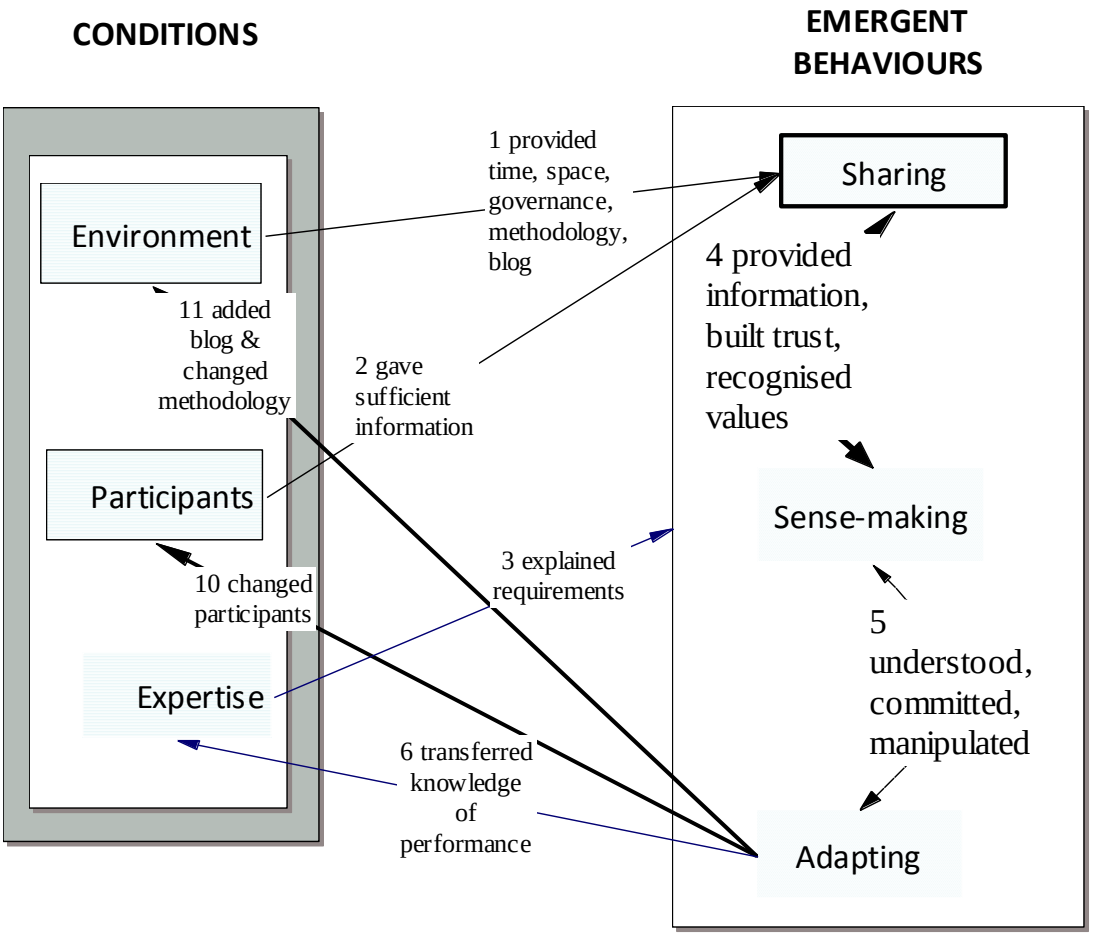


Figure 5-19: interactions in case D

Sharing is the behaviour that seemed to matter most in this case study because it allowed people to build trust, so that subsequently participants could begin other behaviours of sense making and adapting, which implies sharing must emerge before other behaviour can emerge. Another interesting thing about the template applied to this case study is that the participants changed, and the environment changed, in that the development approach changed from purely waterfall to one that allowed iteration.

The two scenarios for this case study are interesting because of their differences. These different scenarios for the same organisation at different times suggest that the model could serve as a normative paradigm, pattern or prototype for engagement.

5.5.6 Value

Interaction 7: how did sharing produce value?

Sharing knowledge of performance required shared discussions and the behaviour brought value. For example, "*corridor conversations*" were valuable because that social interaction between suppliers and client allowed monitoring of problems to deal with them before they grew. The account director commented that he liked to know stakeholder's personal pressures from a business perspective:

> *Listen to their business pressures; what their business is going through and then join the dots between each of the statements that they make.*

The sharing allowed him information that helped him to monitor the business.

Sharing led to good teamwork, aligned business strategy with IT objectives and shared issues. This exchange of knowledge helped sense making. Sharing focused expectations and interest helped through increasing trust and creating commitment.

Shared values begin to be recognised as people learn about each other's organisations:

> *Some of the other values that they have are absolutely the same as our own.*
>
> *Success can mean success for [Supplier] and success for [Supplier] is success for us [ITDD]*

The above quote indicates a mutual gain for suppliers and client

Intangible value accrued from increased knowledge and improved relationships so that people with pride in their work professed to do a professional job. Although cosiness was eschewed, small talk mattered at all levels, giving a feel of ease between parties and at strategic level, allowing managers to discover commonalities that eased negotiation. That ease built trust, which was important to the people that had not met or worked together before and who came into negotiations. Although formal meetings allowed audit trails, which were important for accountability, cafés and informal contexts eased communication before formal recorded meetings were held.

Interaction 8: how did sense making produce value?

Sense making meant participants exchanged knowledge of each other's organisational culture and aims. Value was in this knowledge exchange leading to better performance through more and sufficient explanation of requirements that led to timely analysis and software development, and a consequent smooth release of software, with optimum combination of costs and quality.

The programme was so successfully delivered that it won an award. Its lessons were transferred and practised on another programme, and those lessons led to an innovative approach to relationships between multiple suppliers and this government office.

Interaction 9: how did adapting produce value?

Relationships improved as the supplier adapted behaviour so that the service matched what the client required. The account director for example used the information he had gathered on stakeholders' aspirations to:

> *Then set an agenda that starts to a) change their perceptions, b) accommodates businesses and personal pressures that can only be done therefore by raising one's game as a team [S-AD]*

Monitoring pressures allowed management to recognise and tackle problems before they festered,

Participants manipulated the environment (e.g. blog, informal spaces) to realise new forms of collaboration and exchange knowledge. See interaction 11 in Figure 5-19 and Figure 5-20. This behaviour became a model to cascade over to other programmes because it had saved this programme so much money. A valuable consequence was that the government department negotiated renewal with this supplier and its partner supplier, thus providing work for the supplier companies and saving money for the government department.

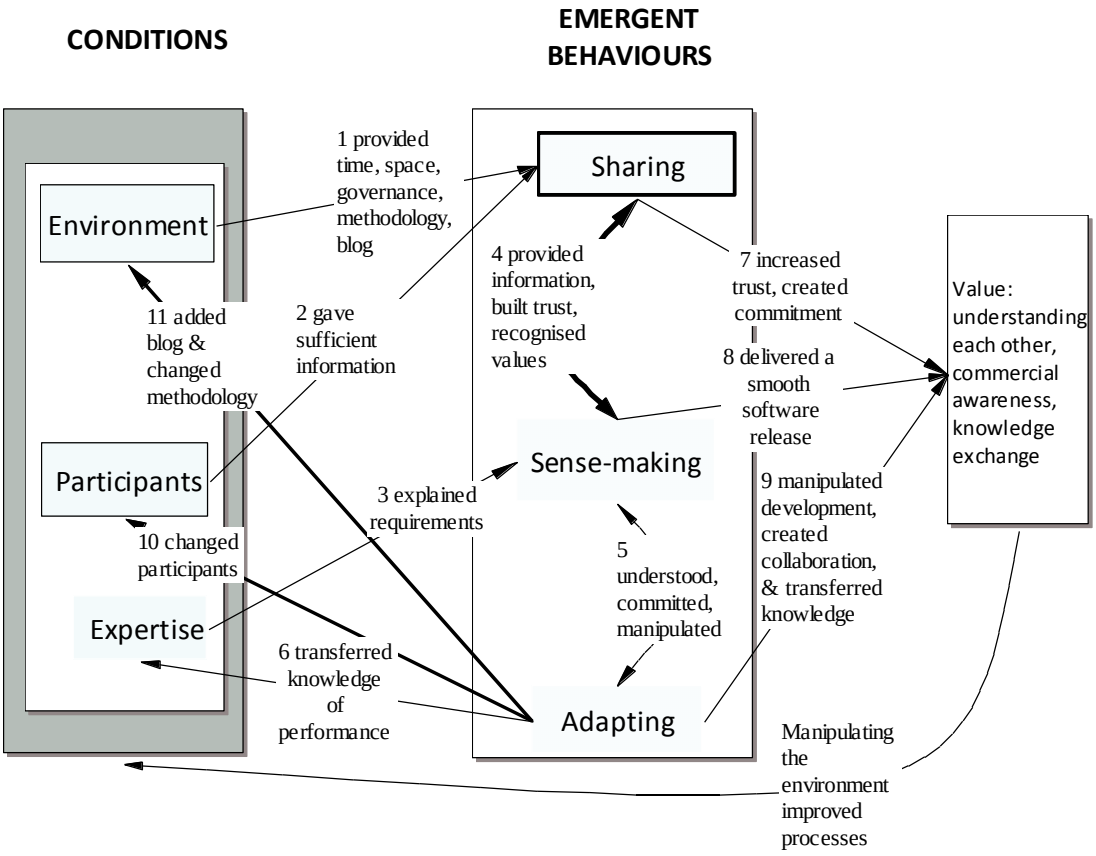


Figure 5-20: value in case D

Figure 5-21 summarises the value produced from the emerging behaviours. The value from engagement is not tangible, but the behaviours allowed future negotiation that brought massive savings to the government department, and work for the supplier company.

5.5.7 Summary case D

The first scenario appeared to be in an unsatisfactory static state. However, in the second scenario, conditions changed; participants and the environment changed, new participants joining, and an electronic blog being introduced. Client senior management participants influenced sharing and after sense making, they adapted the environment for all. In turn, a change in environment changed behaviours. The second scenario appeared satisfactory, but also dynamic in that once started, the engaged behaviours continued to happen.

5.6 Case E: discussion

This section describes evidence of engagement between consultant and the non-departmental public body (NDPB) employees who participated in this short consultancy project.

5.6.1 Environment

Place

The NDPB was on more than one physical site, and the consultant had to interview people on both sites, usually face-to-face. The consultant, once he had been through security clearance, had a base at a rural location with a desk, phone and computer access.

His desk was in a typical open plan office, shown in Figure 5-21 with desks and dividers, and sitting with people,

> *But not the people I was working with, although they were working on different areas of the same [system],*

Figure 5-21: open plan office

This physical presence helped him to gain information outside formal meetings.

> *and so there were people to go for coffee with, who weren't working on the same stuff, which is good, because then you talk about what you're working on with other people,*

Having access also allowed the consultant to control the environment in which he met people.

> *In terms of the relationship between myself and the person I'm talking to, I always try and make it as manageable as possible, in an informal environment. The canteen is great for that sort of thing. Sometimes they have an office, but we try and make it more relaxed.*

His security clearance meant he could also access sites almost as a permanent member of staff. When visiting other sites he would arrange to speak to three people in a day thus saving costs on travel. Follow-up questions were then done through phone calls or emails. He also took opportunities to walk round sites, and to use electronic services as if he were a customer of the NDPB.

Hindrances were mainly that the consultant was based in one place and some people he needed to talk to were in another. Sometimes phone calls and emails were not answered. The consultant commented that if there were not a geographical problem he would *be going and knocking on office doors*.

Artefacts

Shared documents included: framework documentation, terms of reference and procurement contract, the action plan and weekly time sheets, a summary of all the customer processes that involve order fulfilment as a chart on the IT PM's wall and two documents as output of consultant's research.

This last document is important to the project because it is the contractual output specified in the scoping document as tangible deliverables. Together with the ISD head, the consultant produced two documents. The first was a reference document containing details of all of the services, indices, plots, glossaries and second was a ten-page summary document. This smaller document leads the reader through the analysis, and is the document that the directors and senior management used.

The Terms of Reference were important to the IT PM and the architecture manager. After the contract was awarded, they spent some time with the consultant developing and extending the terms of reference, agreeing goals, deliverables and timescales.

The NDPB procurement contract complies with the relevant Office of Government Computing guidelines for such frameworks. See appendix, Appendix 4: procurement frameworks at page 309.

The ISD IT project manager managed the consultant, who reported to him weekly with an action plan indicating which days he was going to work, and who he would be interviewing.

The consultant collected facts in a personal logbook with handwritten notes and diagrams where he also noted prepared sets of targeted questions for each interview. His four standard questions were:

> Which business services are offered with respect to…
>
> Which customer segments use those services?
>
> Which document helps you deliver this service?
>
> What are the technical systems?

At the regular meetings, he might present facts via a slide, a spreadsheet or a document.

Time

The IT project manager managed the consultant, and talked with him regularly. The IT PM allocated time to introduce the consultant to his potential interviewees, and took time to go with him to other sites.

The time allowed to complete the project was twenty days over two months, he delivered on time.

5.6.2 Participation

Governance

As in case C, this project was a consultancy investigation rather than a system development and seems to have been too small to need the formal governance structure of a PRINCE2 system development.

Participants

The previous chapter indicated key parties in this project. The diagram at Figure 5-22 adds to this by showing some participants from the three key parties: business, ISD and the external consultant.

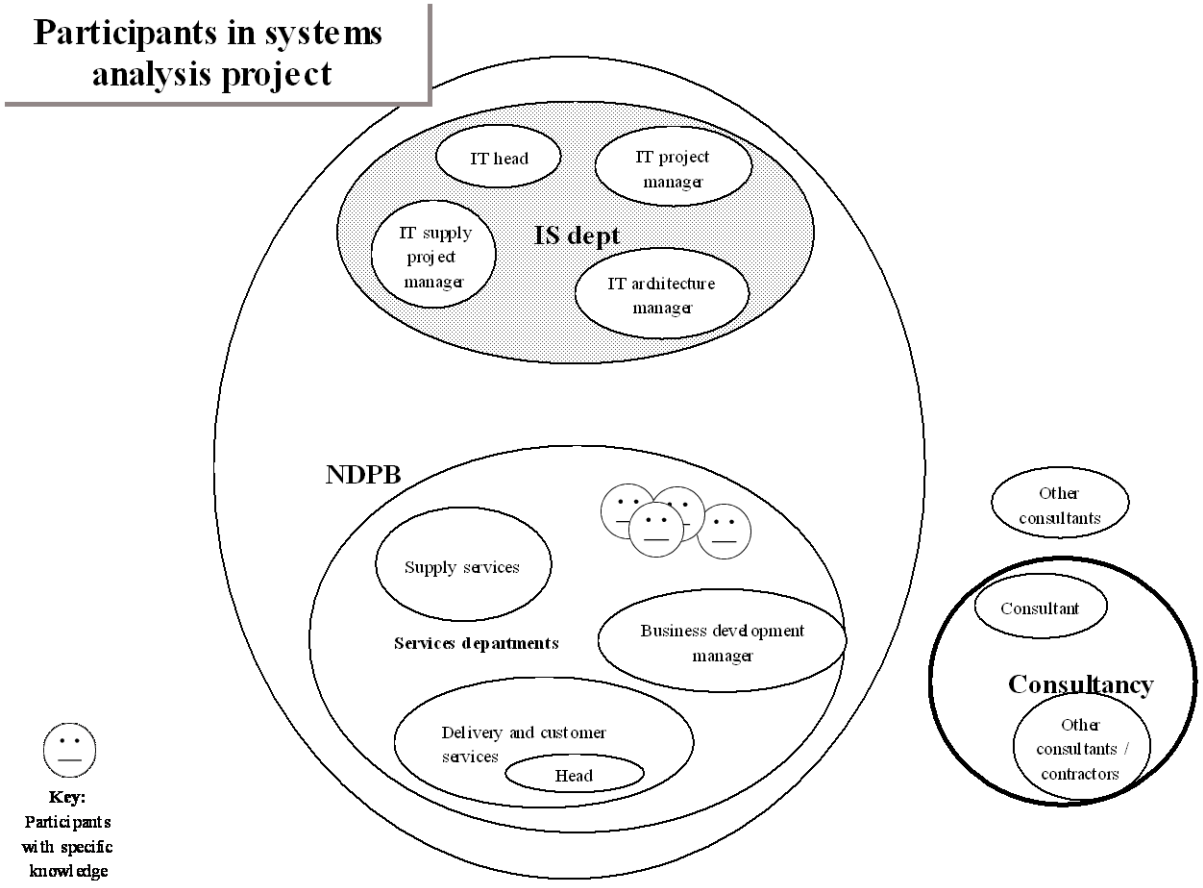


Figure 5-22: participants in case E

Business participants

The business participants had knowledge that the consultant had to obtain, collate and distil into a document for the ISD team to use and share with the NDPB's business directorates.

For example, the consultant spoke to a technical person who had been doing the job for a long time so he had worked on many of the systems, knew many of the business people and was able to help him. Another gave him documentary evidence:

> *She was the one who gave me the big document…actually in the canteen, and that was a big help. She gave me more information, but because she had been at the [NDPB] for 15 years, which is why - to a certain extent she was also able to tell me what a lot of the acronyms were. You know the reason why there were so many different ways of accessing these systems, because the reasons were often historical.*

ISD participants

The ISD team formed the client, who commissioned and briefed the consultant, agreed terms of reference, and managed the work.

External participants

The single consultant used contacts within his consultancy organisation that were placed on other contracts with the NDPB. One such colleague had been at the NDPB for three or four years, and had a wide-ranging view of the NDPB systems and had done similar research so was useful to talk to.

A problem of participation was finding time to speak with each other. The ISD head was busy, so was the architecture manager, though both had sufficient investment in the project to make time so the consultant worked round their schedules. The IT PM was most available. However, such hindrance also affected potential participants whom the consultant might have interviewed but they did not have the time to spare.

The map at Figure 5-22 is a static representation of the participants. This project requires someone to span those functional boundaries in order to exchange knowledge. In this case study, the active boundary spanners seem to have been the IT project manager and the consultant.

5.6.3 Expertise

This section analyses what expertise participants contributed. In this case study, participants contributed management, technical, business expertise and procurement skills.

This project came about because many people in the NDPB had expertise about specific services and customers, but the total had not been documented, so the knowledge of the bigger picture was lacking. To paint the bigger picture, key parties need to contribute information and skills together, rather like in case C.

The skills sets of the key parties on this project included management skills, consultancy skills, technical skills and procurement skills. Skills overlapped, for example, the IT PM and the DSC PM shared project management skills, whilst the consultant shared consultancy skills with the ISD head, and technical skills with the architecture manager (AM).

Management skills

The ISD head's contributions were management and consultancy skills. The ISD head contributed his prior experience of how to communicate with non-IT business people. He had been a consultant so knew what an executive report should contain. His experience helped the consultant to present the huge quantity of information, sifting the significant and structuring the report to communicate its message.

In close collaboration with the ISD head, the consultant put together a document that summarised his findings, and fed understanding of the needs of the bigger project, a new system that would replace a number of systems and capability.

Technical skills

The IT PM's expertise lay in project management and he understood customer needs in online order fulfilment. He expected the consultant to mediate between the technical and business side of the organisation, finding where things were normal order fulfilment and where things were unique to the NDPB, and to do this quickly without people feeling he was wasting their time. He saw the benefit of having project managers as being able to manage change, whilst keeping the big picture of the business in mind, thus delivering technology that would support the business side.

The IT PM realised the value of bringing people on board the project before it started, and introduced relevant people to the consultant. This is interesting because it initialises the consultant's social capital through knowing the IT PM and in turn knowing the people that had the required knowledge. It indicates how people could begin to trust each other. The IT PM also used this as an opportunity to help the consultant to absorb information, avoid judgements and have interviews with positive people.

The supply project manager's role was as technical as the IT PM's role, but with a narrower focus, concentrating on the development of remote services systems based around document supply at one site. He worked closely and frequently with the consultant, face-to-face and following up with emails, where the consultant would record at a detailed level what had been said and ask queries. For example, the cost of a service might have been recorded as £5, which the supply PM would correct to £6.

The consultant had technical skills, such as coding and systems diagrams. He shared technical expertise with the architecture manager who knew something about how all the systems interacted, knowing the big picture but not the detail. He found her enthusiastic, and was interested that they separately produced the same UML diagram. This is interesting because it suggests that she shared her knowledge of the business with him so that he could produce the diagram, and the subsequent diagrams revealed they thought the same way (Wastell, 1999).

Consultancy skills

The consultancy was known to have consultants with good communication skills, good at listening, working out problems and articulating them. This particular consultant also had system analysis skills. The ISD head argued:

> *He's a very capable guy, so if he says "I can't work this out" there has to be a reason, and the reason is because it was a difficult problem.*

Others also stated that the consultant was an effective and reflective listener. He would reflect back what he had heard, to check his understanding. The architecture manager (AM) learned from him to be more aware of reflecting back what she was hearing from someone.

> *He was very good at reflecting back. Is this what you mean, are we talking about the following, that kind of qualification question. [AM]*

The IT PM was confident in the consultant's ability to work without needing to be micromanaged. For example, once the consultant had security clearance he could sort out the interviews himself rather than needing someone else to sort them out. Managing stakeholders and communication skills was part of the remit.

> *It's the being able to talk to people about what is the problem before you throw a code at it. [AM]*

The consultant had the ability to elicit information from key parties, and technical skills that he used to analyse and synthesise that information. He collated his findings into a multi-page spreadsheet for cross-referencing that could be used to find customer trends.

There was a hint of criticism of the consultant's writing skills, but not of his skills in engaging with people to obtain and share information. The architecture manager commented wryly on his writing skills:

> *I think he learnt a new technique of writing documents [AM]*

Procurement skills

Picking the right people to begin with made the work easier, which was the procurement officer's area of expertise. Her expertise lay in understanding legislation requirements for contracts, and she knew how framework agreements worked. She also had expertise in both technical architecture and in managing IT resource contracts, which is why she ended up having formal responsibility for the NDPB's frameworks and running procurements. The ISD head organised the procurement and the ISD team had an input, creating and sharing a scoping document that emphasised deliverables. The IT PM, procurement manager and the architecture manager (AM) talked about stating deliverables.

What I thought was very important actually was getting the terms of reference right. If you hadn't got your terms of reference right at the start of a project, what's this goal, what are the deliverables, what are the time scales, who is it you're expected to speak to? [AM]

Rather than having a bit woolly, oh, let's give an analysis on this work, I prefer to say, what are you going to deliver? [IT PM]

There is something about [] clear deliverables with clear criteria for the deliverables. [Procurement manager]

The procurement officer contributed expertise in managing the IT resource contracts, setting up the right contract with the right person.

Other contributions

Other contributions might be due to the NDPB's culture, which reflects the client environment. Culture can be difficult for temporary incomers like consultants and contractors. However, the consultant was quickly aware of the culture and adapted to it.

The [NDPB]'s got its own peculiar culture so it can sometimes be quite difficult for contactors or consultants to come in and understand how the culture will affect their work. [..] He picked up on it almost straight away. And changed his working – well I don't know if he changed it but he was flexible enough to work differently with the different people. [Architecture manager]

The interviewees expressed attitudes that reflected or contributed to the organisation's culture:

I just think it's cool what we do. I think what we do is fantastic. [..] I want to get all our material online because I just feel that people don't understand. [IT PM]

It's a great place to work. You really feel like you're putting something back into it. You know, there's a visibly feel- good factor about working here [AM]

Such comments indicate the vigour, dedication and absorption that represent employee engagement (Saks, 2006) and indicate how participants' attitudes reflected and added to the NDPB culture.

This pattern of contribution shows the people who are able to share knowledge usefully. For instance, the IT project manager successfully spanned the boundary between the consultant and the business users, and the consultant and architect manager spanned boundaries between themselves. Therefore, in this case, the expertise of most interest was that of the consultant.

5.6.4 Emerging behaviours

Sharing

In this case study, there was evidence of sharing information to produce the executive summary. The consultant had two tasks: meeting people in order to elicit information from them and creating a document. Meeting people was the consultant's responsibility but at the beginning of the project, the IT PM decided to share the rationale with potential beneficiaries and arranged one to one meetings, allowing him to introduce the consultant, so that interviewees were expecting and ready for him to interview them.

The consultant preferred face-to-face interviews, rather than email or phone calls, to be able to tell if interviewees wanted the project at all.

> *There's no point in sending a questionnaire out with A, B, C, D answers, because you won't find out. You'll just find out what people want to write on the questionnaire.*

He found few people being cagey, and the only difficulties were sometimes in trying to meet busy people. One way he found to solve that problem was to share other people's interviews.

> *There was someone from my company that was doing a different piece of work, so I kind of piggybacked on his interview, and we talked together, and we will both go and see this person at the same time. That way, we were both asking the same kinds of questions. He's not having to find two lots of time, also that might make him a bit more comfortable.*

Sharing facilities with permanent members of staff helped the consultant to integrate. The architecture manager commented that that integration in the open-plan office probably helped him being able to relax a little bit at his desk. In addition, he could talk with his consultant colleagues already working at the NDPB sharing information when he saw them.

Office politics influenced potential shared aims, and the consultant had to recognise and deal with these politics. One political issue he suggested is that people may mistrust the need for a project, but an external consultant might be seen as impartial, and this consultant argued that he could be perceived as an impartial voice.

Another political issue was that departments had not to be seen as stepping on each other's toes, doing each other's work. The problem here was that the business departments did not expect the ISD directorate to be telling them how to do their work, and the consultant was seen as part of ISD, who might be criticising the way the business side ran things, which was a problem in case A also. For example, departments were duplicating effort, and ISD was attempting to identify the duplication and remove it in order to make the business more efficient and the systems more maintainable. However, a department might consider its systems unique. The IT PM argued that

> *You're better off buying a system that fulfils 80% and then maybe tinkering about changing your business processes. You're all doing ordering? Makes no difference if you're ordering a book, newspaper, even a cup of tea from the café – you are still ordering.*

Such problems of understanding IT systems demonstrate hindrances to sharing but if there were problems, the consultant would share them with the IT PM at the weekly meeting and he would also discuss them with the ISD head.

The structuring of the final document was a major shared task. The ISD team did not know what the end deliverable would look like so they could not provide a template of it but wanted the consultant to develop and review it with them. That approach worked because the consultant was prepared to work with the team and the members of the ISD team shared the aim of creating a document for business departments' use. The ISD head had a major input on the structure although the consultant wrote the content. The ISD head indicated what size and presentation was required for a document that could be shared with managers who did not have IT expertise. The production of the final summary document took several iterations. The consultant had initially created a one-hundred-page technical reference document. This underwent four major changes as it was edited to a final twenty-page executive summary.

> *I think that's good IT work, and if you ever ask me what sometimes goes wrong in IT is people don't look at it from a business point of view, and I think that's what we bring to this. We are delivering what the business need, not purely what IT has to have. [IT PM]*

If sharing developed between consultant and some actors not others, it was because some actors, such as those in ISD understood their stake in the project more than others did. For example, it was clear that the ISD participants with stakes were the architecture manager, the IT PM and the ISD head, all of whom worked closely with the consultant.

Sense-making

There is negotiation over expectations because people may have unspoken assumptions.

> *My experience of requirements is the simplest statement can be consistent with several icebergs under the water, expectations as to what they need. [AM]*

The people the consultant interviewed came from diverse backgrounds within the NDPB. However, many of the participants come from ISD; whilst they had complementary skills and roles, they had a history of working together and so it might be assumed they had already negotiated meaning around much of their work.

The IT PM anticipated managing stakeholder expectations about the project, initially considering inviting everyone to a three-hour show-and-tell. However, he decided that he did not want to start the relationship with a meeting where people might be interested in only part of the presentation, so decided on one-to-one discussions. Believing he saw the bigger picture, he directed the consultant as to which people to spend time with.

The ISD head gave an example of sense making when the consultant *"was picking up signals about things, but he was not able to put them in place"*. Then he would ask the ISD head to guide him. The ISD head appreciated this honesty and curiosity and together they would think about the problem, work out the pattern and make sense.

The IT PM wanted all parties to be aligned about expected outcomes that the consultant might deliver. This helped understanding that time had to be allocated to the production of the document, rather than spending all the allocated time on interviewing. Therefore, some clarification was about how the ISD team expected the consultant to allocate his time. On the delivery of the document, people were ready to negotiate its contents because they started from not knowing what they would eventually know, so were prepared to wait for the

analysis before making an informed decision on its contents. The contents were then reviewed several times. The consultant recognised a political perception that the ISD team's project might be taken to imply criticism of business departments, which was potentially embarrassing. So he trod carefully, to persuade people to trust and talk openly, using terms that didn't threaten people's comfort zone and aiming first to establish trusting relationships:

> *You have to talk face to face as much as possible. You have to establish a rapport with that person, and you have to make them think you're really nice.*

To obtain information he would ask for opinions and thoughts, as opposed to facts explaining the value he put on receiving a subjective perspective:

> *Those sorts of things can give you a view of the truth, which you might not get from just asking for facts. You can form opinions about things people haven't said, just as much as you can about what they have said. You have to find out what's really going on.*

He had to check his understanding, which he did by reflecting back on what his interviewees had said. One misunderstanding occurred through mishearing "ePRINCE" rather than ePrints, and the name of the service was misunderstood, leading him to believe a service called ePRINCE existed. This caused him some confusion until he came across the ePrints service through another route and saw the term written.

The consultant knew his key stakeholder was the ISD head, so made sure he understood his expectations first, and then listened to all his interviewees whilst recognising that each person had different concerns: security, revenue generation, customer satisfaction, efficiencies. Each business head that he spoke to would have a different focus depending on the service they provided. This made negotiating meaning a constant struggle and offered a worry that the final document might offer diluted messages for its multiple audiences.

Because the consultant could not always draw conclusions, he would discuss them with his key stakeholder, the ISD head:

> *He'd quite often say I'm finding this kind of pattern, but he could not articulate exactly what it was, so he was able to ask us. [ISD head]*

The IT consultant had problems finding just the right word but he could articulate that he sensed something without knowing just what, or how to explain it. For example, he might use the words 'coordinate' and 'coagulate' before choosing 'collate'. He asked the director to work with him, so together they articulated findings. That it was successful is seen from this quote:

> *What [IT consultant]'s work allows me to do is have a very good appreciation now of what other business services in the [NDPB] do ordering fulfilment. [I] couldn't tell you that before [IT PM]*

This successful analyst demonstrates sense making is possible without perfect articulation. Given the time and place to work with other participants provides opportunities for articulation between participants and reveals the right words. Similarly, he worked with people to persuade them to articulate their submerged (tacit) knowledge.

Adapting

The consultant's adaptability was important to a time-bounded project, which took only two days a week. He had to select and prioritise commitments and fit them in. He would ask the ISD team the best way to approach somebody, and when he needed to access senior people but could not acquire the information from a particular senior person, he would find somebody else who would know about those systems. He would use personal relationships, such as people a senior person had worked with before to find whom else to talk with. As he began to know people, he adapted his means of communication to reach further informants. He used people he met in the environment

> *"There were people to go for coffee with, who weren't working on the same stuff, which is good, because then you talk about what you're working on with other people, and they'll have a different perspective and a wider view perhaps than my wider view, because I was looking at the big picture. I was perhaps the one with the wider view, and they had their more focused views.*

Although he acknowledged to people's managers that he was going to take their time, sometimes access to people that could help him was not directly through the formal hierarchy but sideways:

> *"If you think of a hierarchy as an upside down tree, and you can go up to the node, up to the junction and back down the other side, which is going via the manager, or you can jump across. Jumping across worked quite well really, because there's always somebody who knew somebody from playing squash with them or sitting in the canteen with them, or just knowing them for years and years, and they were able to make a recommendation that I talk to this person,*

Working electronically when possible meant that the consultant's investigation interrupted the business less, although it was necessary to have that initial face-to-face meeting. Before meetings, he had to prepare:

> *You have to do your homework, you have to try and get all of your questions answered as quickly, as much as possible so that people don't feel like you wasted their time. [IT PM]*

That is, he adapted the way he worked to meet different peoples' needs. For different expertises depending on whether the interviewee had knowledge of a specific area or an overview, he would put a different slant to the questions he asked of interviewees.

The architecture manager adapted because of the consultant's work, feeling that she improved her methods of working though imitating the consultant's reflection. She adapted because of watching and learning from his expertise.

Having collected the information the team had to work with the IT consultant to write the report, deciding what points had to be made and how to argue them. The ISD head contributed constructive criticism that required adaptation on the part of the consultant so that a good document resulted.

5.6.5 Interactions

Having assembled the information on the case study, the next stage is to examine the corresponding components and interactions.

Environment and sharing (interaction 1)

Project participants shared space and time, and the developing report that was the outcome of the project.

Sharing physical space allowed informal chat:

> *Having a door that shuts tends to put people off from coming to talk to you. […] They'd walk past me in the corridor, as they walked past they'd say, "oh, [name], must just tell you about. [AM]*

This comment from the architecture manager indicates that she liked to be available to talk on an ad hoc basis and the right environment lent itself to that informal sharing.

Participants and sharing (interaction 2)

The IT project manager initiated interaction between users and consultant taking consultant to meet them, to save users time, and to see where they worked. ISD participants, especially the ISD head and the consultant regularly discussed what was in the summary document and what its intended readers would need.

Expertise and sense making (interaction 3)

The business participants contributed business knowledge that the consultant analysed so he could draw ISD participants' attention to.

> *He could also identify these are the potential areas of concern you need to think about this. [IT PM]*

That required the consultant and ISD participants to iterate through crucial parts.

Again, as in case D, sense making required sharing expertise in both directions in the client-consultant relationship (Block, 2000). In this case, the client had knowledge of system requirements to share with the consultant, but making this tacit and sometimes complicated knowledge explicit proves difficult.

As in case D, participants deliberately looked for cues. Regular meetings between the ISD clients and the consultant to share findings, produce a document and criticise constructively meant that people had access to new cues through their social contact, so could infer new information, offer ideas, feedback and make new sense.

Sharing and sense making (interaction 4)

The summary document shared between ISD participants and the consultant iteratively allowed sense making.

We had several iterations of the most crucial parts of the document [head ISD]

The iterative activity allowed ISD participants to place signals and articulate patterns.

It became a sort of a cyclical document review as well, in terms of the reader leading towards the conclusion that we wanted [IT consultant]

As they articulated the patterns, the ISD participants realised what they wanted the document to say.

Sense making and adapting (interaction 5)

Sense making is time consuming and takes effort. Participants have to find the time to make sense, and adapting takes effort. The consultant made it easier for his interviewees by adapting for them:

"He was flexible enough to work differently with the different people." [AM]

The architecture manager's remark suggests that consultant's behaviour is important for adapting behaviour according to participating client. See also case B.

Adapting and expertise (interaction 6)

The consultant identified his primary client, took time to learn his requirements and mode of working, in this case his preferred writing style and then made the effort to match.

Figure 5-23 shows all six interactions equally strong; this is not surprising as the project appeared to its participants to be successful, and it completed to time and budget with a useful final report. The interactions imply that participants behaved in an engaged manner.

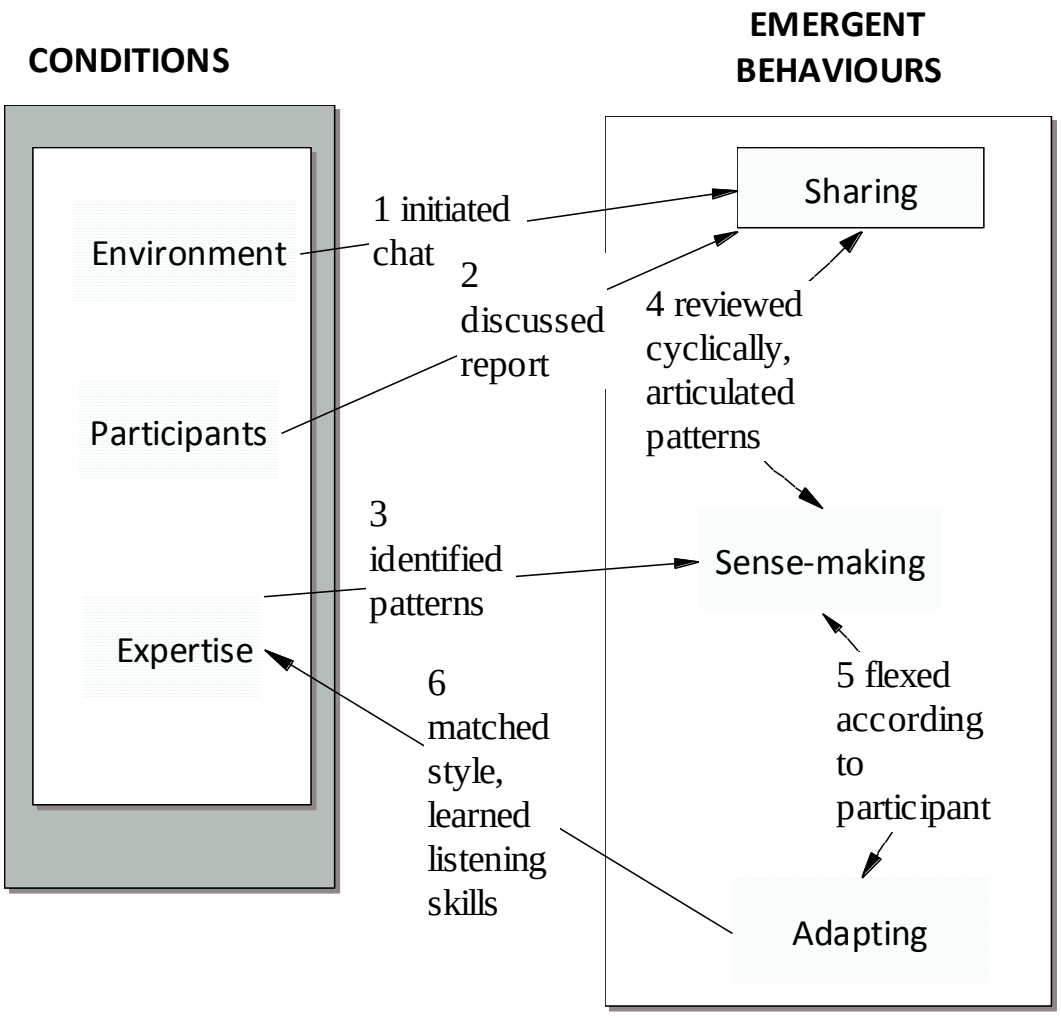


Figure 5-23: interactions in case E

Sharing seems to be the behaviour that matters most in this case study, because sharing allowed the consultant and clients to make sense of the consultant's findings, and allowed clients to guide the consultant on how to structure the report.

5.6.6 Value

This section analyses interactions between emerging behaviours and value produced.

Interaction 7: how did sharing produce value?

Sharing and trust reinforced each other. As in case C, in case E, trust meant that the consultant avoided being micromanaged because sharing knowledge of credible performance engendered trust. That saved client management time.

Interaction 8: how did sense making produce value?

The consultant was able to synthesise information of existing systems through the tacit knowledge that he elicited from his interviewees and discussed with his clients. The value is in the exchange of knowledge.

Interaction 9: how did adapting produce value?

The consultant adapted his writing style. The consultant transferred knowledge through new reflective listener skills so the architect manager adapted her listening skills. The ISD head possessed knowledge that the IT consultant was able to acquire from him. Value was in the transfer of knowledge between them so that the consultant could better analyse for his clients, and write a better report.

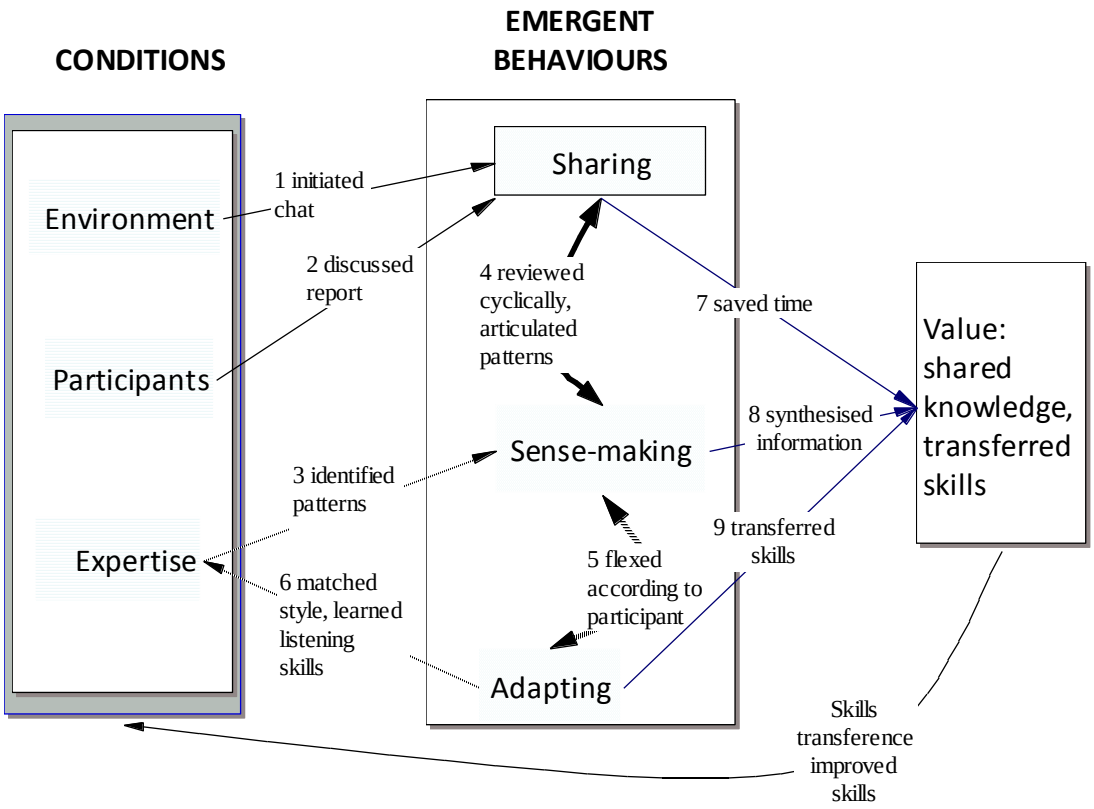


Figure 5-24: value in case E

Figure 5-24 indicates intangible value produced from behaviours that helped achieve the project. The value to the consultant came through the transfer of writing skills to him from the ISD head. The value of those improved writing skills was first in saving time to reach

the final report and secondly, in the synthesised information in the final report. That information was subsequently shared among senior managers helping them get a better understanding of systems they were working with.

5.6.7 Summary case E

This short consultancy project seems to be a paradigm of engaged behaviour, demonstrating stable conditions and repeated behaviours of sharing, sense making and adapting.

5.7 Overall summary

As part of a qualitative data analysis process, descriptive matrices have been used to augment the coding analysis and to display summaries of the conditions.

5.7.1 Conditions

The analysis of the components of the conditions are summarised in two descriptive matrices below (Nadin and Cassell, 2004).

Table 5-1: components of conditions

Environment	
Physical environment	Offices, open plan offices, meeting rooms, cafe, corridor, off-site
Electronic environment	Blog, SharePoint
Shared artefacts	Project documentation, log book, blog, culture, methodology
Time	Time span of the project, and time to meet, whether formally or informally
Other	Culture is an intangible artefact, not necessarily shared, but the different parties might make efforts to understand the differences. Governance was shared. Governance and culture appear to be influential but may not be part of the environment.
Participants	Issues: choice of participants in case B, change of participants in case D, interaction of participants in cases B and C.
Specialists	Business, consultancy, procurement, technical (e.g. software development or systems analysis), management, interaction
Boundary spanners	Boundary spanners are people who specialised in more than one area such as project management and consultancy, or business and management, e.g. Case A: consultancy CEO, e-services manager, IDS CEO Case B: consultancy PM Case C: consultant Case D: account director, engagement lead, IT delivery director, commercial director, Case E: consultant, head ISD, architecture manager, PM.
Expertise	
Managerial skills	All cases showed managerial skills from participants from ISD and the business side
Technical skills	In all cases, ISD participants had some technical skills, but liaised with the business side, often apparently as an intermediary between very technical software developers and business experts.
Consultancy skills	In cases C, D and E, listening was important for consultancy.
Business skills	Clients understood public sector business, had years of experience, e.g. Case A: tester Case B: licensing officer user, BSM Case E: architecture manager's evidence of NDPB culture
Project skills	Project managers in cases B, and E had project management skills, but also demonstrated softer skills when they talked about the business participants that they worked with and influenced. They seemed to span functional boundaries, understanding technical as well as business issues.

From the above summary of the five case studies, it seems that categories of environment and participants are emerging. It is interesting that in every case, the external consultant or

supplier had skills in more than one area. On the larger projects, more clients were involved, some of whom had a wealth of expertise, and clearly spanned functional boundaries. Categories of expertise that emerge are managerial, technical, consultancy, business and project management skills.

5.7.2 Emerging behaviours and interactions

This report of the research interviewees' relationships has highlighted three emerging behaviours: sharing, sense making and adapting. These behaviours appear to influence each other and the conditions, and are summarised in Table 5-2 below.

Table 5-2: summary of behaviours and interactions

Behaviours	**Interactions with conditions or behaviours**		**Case study**
	Conditions	**Behaviours**	
Sharing	Environment		A , B, C, D, E
Sharing		Sense making	A , B, C, D, E
Sense making	Expertise		A , B, C, D2, E
Sense making		Adapting	A? B, C, D2, E
Adapting	Expertise		A , B, C, D2, E
Adapting	Participants		B, D2
Adapting	Environment		D2

Sharing and sense making behaviours are iterative, and their emergence leads to adapting behaviours. These behaviours do not happen just the once, but continually. If they stop, as in the starting scenario of case D, other behaviours seem to be affected too.

5.7.3 Value

Value from behaviours is summarised in Table 5-3 below. Value appears to accrue from participants who share information, and make sense of shared information. Participants acquire knowledge that improves the project process and allows them to adapt. The adapting behaviour adds value to a project through connection 9, and alters conditions, of participants, environment and expertise.

Table 5-3: summary of value

Interaction number	Value	Case
7	Knowledge exchange	A
8	Monetary value from emergent knowledgeability	A
9	Business cases that supported vision	A
7	Reduced risks, lower costs	B
8	Understanding of project process and systems development	B
9	Learned new approaches	B
7	Created commitment	D
8	Delivered smooth software release	D
9	Created collaboration between two suppliers, and manipulated environment	D
7	Saved time	E
8	Synthesised information	E
9	Transferred listening skills	E

In summary, all the components and interactions as discussed in these five case studies are shown together in Figure 5-25 below. This figure shows conditions, emerging behaviours and the interactions between them. The numbered arrows represent interactions that influence the emerging behaviours seen in the model. Each interaction is labelled with the letter of the case in which it appeared.

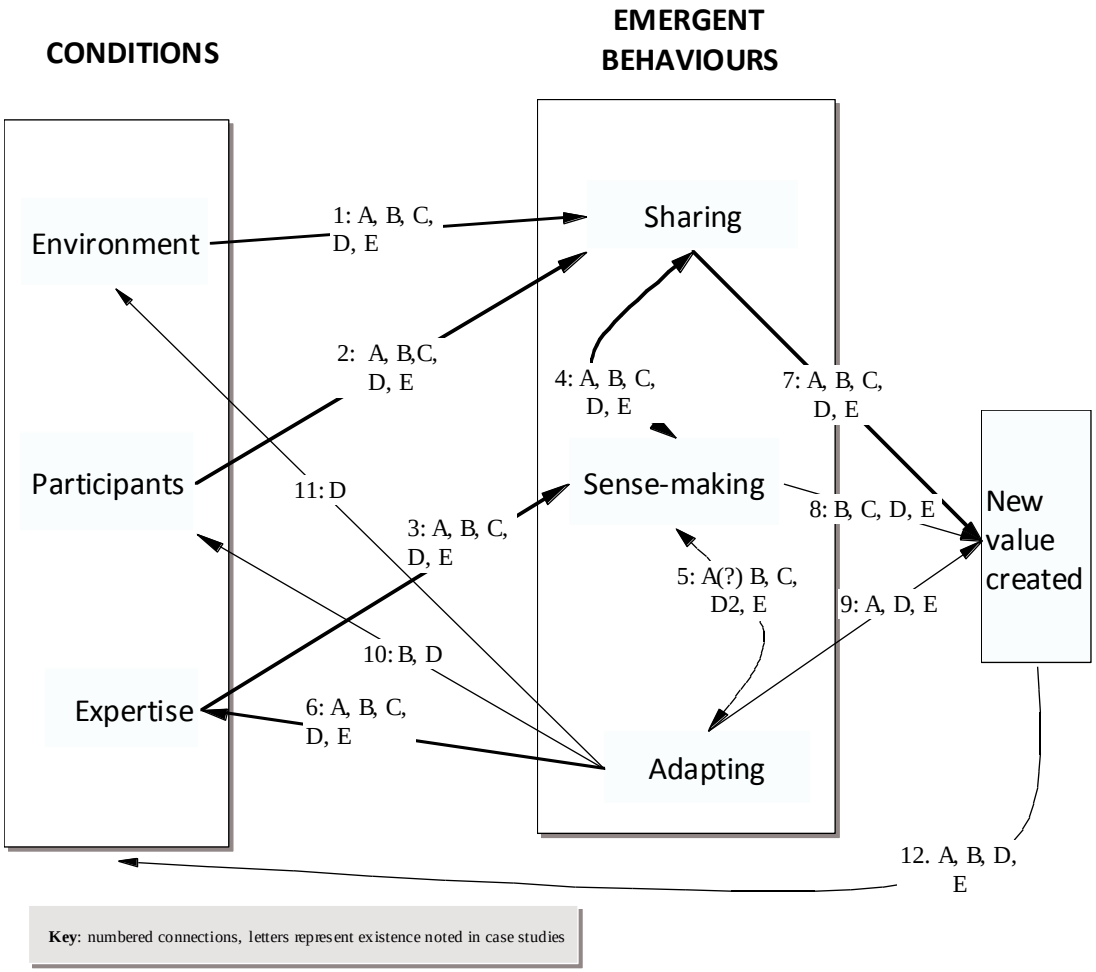


Figure 5-25: model V1

The next chapter will examine emerging conditions, emerging behaviours and these interactions between them.

6 Cross case analysis

6.1 Introduction

This chapter analyses similarities and differences across the five case studies using the framework developed from the literature and applied to the cases in the preceding chapter. It is structured to address the four research questions, taking each in turn:

What behaviours are required for engagement?

Which conditions are important for producing engaged behaviours?

How do conditions and behaviours interact?

What kind of value results from engagement and how is it produced?

This chapter therefore has four sections each of which discusses and answers a research question. A final fifth section summarises behaviours, conditions, interactions and value.

Figure 5-25 earlier on page 222 shows conditions, emerging behaviours and the interactions between them that the preceding discussion of the five case studies has highlighted. The evidence for the interactions came from one or more of the cases and this chapter will discuss those interactions. This chapter will also discuss how interactions between behaviours indicate the self-reinforcing nature of engagement where the emerging behaviours create additional, similar behaviour creating self-reinforcing cycles.

The chapter starts with an analysis and discussion of emerging behaviours in order to identify which behaviours might be considered engaged behaviours.

6.2 Research question 1: what behaviours are required for engagement?

Emerging behaviours arise from combinations of the conditions. Taking the lead from the literature, the interview questions asked about relationships, the shared knowledge and the value gained from the relationships, so not surprisingly, the behaviours that were reported by

interviewees related to these questions. Three behaviours in particular were noted: sharing, sense making and adapting, although communicating, contributing and participating were also in evidence. These behaviours may be sequential or iterative in the way they emerged. However, it could be considered that whilst some of these behaviours could be present without amounting to engagement, other behaviours are essential for engagement. Therefore, this chapter starts with an analysis and discussion of emerging behaviours in order to identify which behaviours might be considered engaged behaviours.

6.2.1 Sharing

Sharing was affected by time, space, artefacts, communication channels and culture. Sharing entails more than communicating. A dialogical process is one "in which one builds concepts in cooperation with others" (Nonaka, 1994: 25), but if the cooperation is lacking then despite communicating the concepts, they are not shared. For instance, in case A, the consultancy CEO remarks on the need for business and ISD to focus attention on shared business aims, but,

> *Now [the BSM] doesn't work for me - he works for DoT so it's not always an easy conversation to have.*

The business systems manager also knew there was a difficulty of communicating with ISD

> *I had a lot of difficulty engaging ISD. It wasn't a …there wasn't a.. I didn't know how to use ISD and they weren't used to...*

For the business departments, it was problematic to build an effective relationship with ISD and to share priorities. The director commented,

> *What do they do? What don't they do? And [...] are they working to our priorities or their priorities? And, if our priorities don't coincide with them, do we have any option to do anything different? These are definitely issues in a centralised organisation.*

Some of the difficulty of communication was partly solved when the ISD brought in procedures to handle service requests so that business departments and ISD then had a shared channel for communicating.

Sometimes a participant may not share time and space with other participants, though written communication might reach him.

> *From the steering group point of view, we needed to get the overview once a month. But this fortnightly project meeting where most of the detail went on I didn't go to that [Case B, director].*

Hence, the director communicated at governance level, but did not communicate face-to-face, or share or manage at detailed level.

Sharing time and space through board meetings is one way to communicate, though some informants thought that informal time and space might achieve this in a better manner:

> *We have lots of boards, whether they are really good ways of communicating and will get the business done, whether somebody actually says what they really need to say at the time. I think that's more about having one-to-ones with individuals and a cup of coffee probably but the business is, you know... when you actually sit in front of the public accounts committee it's there and the fact that I had coffee over there with Liz maybe doesn't always resonate so well in terms of formal meeting. [Case D, IT category manager]*

Nonaka (1994) considers that it is hard to communicate tacit knowledge and that the process of creating tacit knowledge is through shared experience or socialization. Formal meetings may not make tacit-tacit knowledge transfer as easy as one-to-one meetings over a cup of coffee do. However, a disadvantage of informal communication in the public sector is the consequent lack of a trail of accountability, when there has to be formal documentation. Formal communication may be a necessary condition for knowledge transfer, but is not sufficient for all types of knowledge transfer. Communicating is necessary for engagement, but on its own is not sufficient, and may not be an engaged behaviour.

Reciprocal communication allows sharing. The literature review identified that participants might share materials (Star and Griesemer, 1989), knowledge (Nahapiet and Ghoshal, 1998), relationships and ownership of meaning (Wenger, 1998) and participants shared tangible materials, such as documents, and intangibles, such as knowledge, and sometimes values, though not culture, as shown in Table 6-1.

Table 6-1: sharing materials

Case	A	B	C	D	E
Shared	values, plan	knowledge, issues	knowledge, rapport, age, gender	scenario 2: plan, knowledge, similar work background and experience	report, knowledge, writing skills
Not shared	Culture, work attitude	Understanding of business or technical or project terms	age, gender, knowledge	scenario 1: plan, knowledge	

The table suggests that some things can be both shared and not shared. That is because sharing happens between different participants and at different times, so in case D scenario 1, for example, participants did not share plans, but later in scenario 2, they did share.

There may be stages to sharing. Sharing time was a starting point for making sense. For example, in case A, the consultancy CEO would sit down with the ISD BSM weekly and with the CEO monthly. It seemed that until participants shared something, they were unable to make sense of each other's knowledge and values. For example, in case A, participants shared plans and time in order to find common ways of thinking and delivering. Other detailed examples of actions for sharing and consequences are shown in the appendices in Table 8-16 on page 338. It seemed to take some effort to share. Case D indicated that participants saw an element of risk in sharing plans. Sometimes, sharing seemed risky and participants required trust to share. Although, it is not absolutely clear which came first, trust or sharing, what seems to happen is that the external professionals, whether consultants or IT suppliers, first display credible performance, and that generates trust from the client, who then feels able to make the effort to share. In summary, sharing appears to be expecting to participate, willing to cooperate with all parties having ownership of the project, sharing thus generated trust, and affected understanding.

6.2.2 Sense making

Data was analysed looking for the characteristics of sense making that Weick (1995: 17) suggests. An analysis of some sense making behaviours is shown at Appendix 18: tables of emerging behaviours in Table 8-17 on page 339. For example, when participants pick up cues of what is really happening, it is then also easier to make sense of others' decisions. Of interest, is the characteristic of enactment (Weick, 1995: 30-38) that implies that participants have control of and can alter their environment. In these case studies, participants brought new artefacts into the environment, but they also changed participants and expertise, exercising agency (Orlikowski, 2006, Sturdy, 1997b, Fincham, 2002a). This is how sense-making leads to adapting because having made sense of what is going on, new expertise is acquired, participants changed or environment adapted.

Client consultant interaction involved clients explaining requirements, and suppliers understanding and asking for elaboration when necessary:

> *"Is that what you meant? Absolutely. But, I want the bit map over there and I want the rendering to be on the screen, okay. Well, we'll come back with the next module. Great."*

This process is negotiation of meaning, when participants make sense of each other's perspective by asking for rephrasing and clarification to check each other's understanding, and then the suppliers can use the knowledge to adapt and develop the software product.

There seems to be a sequence that sharing happens before sense making (Weick, 1995: 158). In all cases, material objects, such as shared requirement documents, helped sense making so consultants and suppliers understood requirements more easily, and the consultant could see how the client worked, and case D, it meant that everyone could align their plans, a finding that reflects Beers (2006) work. The consultants seem to have expected to work at learning and understanding, but sometimes clients seem not to have expected such a process and found it difficult. For instance, the business systems manager (BSM) in case B found it difficult to make sense of the project process and, in case C, the IT support found it difficult to learn from the consultant. In case D scenario 1, the ISD clients could not start to make

sense of the supplier's values until they shared time and artefacts, and generated enough trust to share more, but in case D, the clients had difficulty articulating their requirements, maybe not understanding what knowledge they had to share with their supplier. This concurs with academic literature that recognises difficulties in forcing people to share tacit knowledge (Janowicz-Panjaitan, 2009, Kellogg et al., 2006). The data suggests that sharing and sense-making behaviours iterate in attempts to address these difficulties.

In summary, sense making is central to engagement. Sense making in these case studies is a process of negotiation, to clarify meaning. It cycles with sharing, requiring more sharing in order to make more sense and sharing materials helps sense making take place. Through enacting their own environment (Weick, 1995: 167), making sense allows participants to construct and acquire knowledge and to act on it, which allows a smoother project process.

6.2.3 Adapting

Adapting behaviour is a consequence of sharing and sense making behaviours and brings its own consequences, such as changing expertise, increasing knowledgeability and generating more sense making. For example, in case D, participants adapted to share their three plans. However, they could not adapt until they started sharing. They did not adapt until they made sense of what they were sharing, and could see that it made little sense not to share plans. Another example of a sequence of behaviours is in case A, where the e-systems manager stated the order in which actions were taken to manage a support challenge.

> *So [technical expert] & [programme manager] told me and I said the first thing we've got to do is think about [...]. Do we understand […]? [The technical expert] started taking a log of decisions […]. We went and saw the firewall team […]. We started having a dialogue with them […]. We then got a teleconference with the outside provider […] and they started telling us there had been some changes outside […]. We then got the production services manager engaged and the Chief Technology Officer in a dialogue. […]. We retired the service at lunchtime*

This account indicates that first people shared information that they had to understand before they could start to make sense of what together they knew. They did not take action until they had gathered cues of the situation, that is, they did not adapt the service until they had made sense. An ad hoc informant remarked:

> *The consulting firm may be going off tangent, and you need to bring them back in, and say well, actually going this way may cost us more.*

Clients and consultants cannot adapt until they have seen how each other work. Therefore, adapting seems to be a deeper form of engagement that only happens because of sharing and sense making. Actions for adapting are shown in Table 8-18 on page 341.

6.2.4 Summary of behaviours

Three emerging behaviours have been noted: sharing, sense making and adapting. First, sharing seems to create trust. Secondly, sharing dialogue and materials allows sense making, and thirdly, adapting seems to be a consequence of sharing and sense making.

6.3 Research question 2: which conditions are important for producing engaged behaviours?

This section builds and extends on the analysis at the end of the last chapter that summarised components of environment, participants and expertise. The participants, their expertise and the environment in which they communicated are discussed cross case, to examine the importance of these conditions, and to analyse how they produced the emerging behaviours. The case studies indicated how the two components of environment and participants interacted and influenced each other.

6.3.1 Environment

Categories of environment that were initially noted were place, artefacts and time, but also other emerging categories of culture and norms, as will be discussed.

Place

Places were face-to-face office and informal spaces, electronic spaces. Sharing a space allowed behaviours to emerge. An example is in case E where the open-plan environment allowed the consultant to talk and informally share ideas with other people working on similar projects for the same organisation.

Artefacts

Shared artefacts of importance included documents and methodologies. Participants who shared a blog or a logbook allowed behaviours to emerge. Formal methodologies that provided documents such as project initiation documents and reports that were the outcome of a project process. Participants shared documents, and could and would adapt their environments, bringing in new artefacts. For example, in case D, a new project methodology came with the change of senior management. Similarly, in case A, some years earlier, the consultancy and the CEO had brought a change to project governance practices and a project methodology. These changes seemed to enhance opportunities for engaged behaviour. On the other hand, having different documents that were not shared, such as three sets of plans for three key parties hindered engaged behaviours.

Time

Projects had defined time spans. Participants made time to meet, whether formally or informally. Formal and regular meetings were often part of the project methodology. An example of an informal meeting time was in case D, when the engagement lead from the supplier met the group commercial director for lunch and a chat.

In summary, the environment includes not only place, time and artefacts but also challenges, cultures and values. Some differences make behaviours of sharing and sense making more difficult and some differences between norms in consultant and client organizations are helpful in producing engagement.

6.3.2 Expertise

Expertise has to be contributed to the project. Contributing can be considered as synonymous with providing, adding, supplying, having a say or a role or an input to a project. Client participants and consultant participants differed in what they contributed. The analysis indicates that the following types of expertise were contributed: external participants contributed technical skills and had a technical background whereas clients contributed business knowledge. In case A, three contractors contributed technical software

development skills. The case E consultant contributed highly technical analysis skills, in his information-gathering role. The case D supplier contributed flexible commercial terms. The case C consultant contributed years of public sector IT experience. The consultancy CEO of cases A and B contributed understanding of strategy and vision, and assisted in putting in the governance framework. The role of his company's consultants was three-fold: they contributed focus, expertise and a counter-culture.

> *They bring focus they don't have any other tasks to do. This is their job. They have, they bring expertise – they're all experts in what they do and they bring a level of counter-culture to it. They're not part of government and because they're not part of government they cut across the grain and that's very important. And one of things that I make sure that I myself do and the guys do is they can never ever can afford to go native because they can never afford to be part of government - they want to be part of the team but always in a different way so you have your counter-culture [Case A, consultancy CEO].*

External participants had expectations, sometimes contractual of what the client would contribute, such as office space, meeting schedules, and

> "Turn round on reviewing documents in line with the schedule" ***[case C contract]***

Clients contributed business and management expertise with experience of existing systems. Management clients contributed approvals and reports to a board, such as in case D. The case B director contributed to the department's budgets and department's policy and direction. The case B business systems manager contributed ideas as to which in direction the department would move into the future

> *My role as systems manager for the Department of Transport is to consider which direction the department will move, not now but into the future [Case B, BSM]*

The customer services manager seems to have been a foil to this, as her contribution was to ensure the system would comply with current legislation. The case E, IT project manager described his role as ensuring that

> *we are delivering what the business needs, not purely what IT has to have.*

Case A had a similar issue of ensuring that business drove IT, not the other way round. Participants in case D might have been having a similar argument in that the client wanted to change requirements continually. Participants who contributed control on overenthusiastic

IT development that did not support overall business were helpful to the progress of the project.

Contributing is necessary in order for participants to use available expertise and contributing requires an element of willingness to be involved. A variety of knowledge and skills is required to make up project teams and categories emerged from analysis, including management, technical project management, and interpersonal skills, along with business knowledge or technical skills.

Business expertise

Evidence from cases A, B, D and E indicated that client side informants were knowledgeable about their business, their knowledge gained from years of experience.

> *All the different departments I wouldn't like to say how many I've worked with over the years. [Case A, tester PM]*

Many were proud to the point of being fervent about the value of the work that they did for the nation.

> *If someone's outside, the first thing I'll say is, we've just done a new service, go and have a look at it. It's quite interesting. [Case A, eSM]*
>
> *We are doing it for the good of the country […] I think it's fantastic what we're doing. [Case E, IT PM]*

The consultancy CEO and the ISD CEO together shared a vision for the island:

> *It is a vision that is so important to all the Isle – I'm a [islander] by birth. I've got kids here and what have you. That vision is so important to us, as an economic entity that it simply has to be, we simply have to go down that route. There is no question about it. If we don't follow that vision, there will be economic impacts here. Our kids won't have as much of an environment to grow up in as I have had here. And so that belief in the vision that we've got and the importance of the vision that we've got, and the level of support we've got from the private sector and citizens and the government here makes life very simple. Because what I'm really doing is keeping an eye on the vision and saying, "right guys you're going off over here but that's not the right way for us to be going. We all want to be pointing this way if this thing's going to work." We're a small island and we really can't afford to make the same kinds of mistakes they make in the UK.*

There is passion in this consultant's voice; he wants to use his business, IT and consultancy expertise for the benefit of his nation, his country and his family. There is something special about this case where the island is small, and where external professionals as well as public

servants realise their work is an investment in their country, so that consultant and client appear to have strong, shared norms. It suggests that expertise has links with motivation, and that shared norms and vision enable participants to go in the same direction although they achieve things in different ways.

Technical skills

Consultants and suppliers' performance matters to the client. The consultancy CEO in case A and, the engagement lead and the account director, in case D strongly assert that delivery of performance is essential. In cases A, B and D, the consultants, the IT suppliers and the contracted software developers all contributed an understanding of information technology. In cases C and E, despite their consultancy skills, the consultants would not have won their contracts without technical skills. In case D, scenario 1, the lack of performance of technical skills put the relationship at risk. In scenario 2, performing gained credibility and began a trusting relationship. In general, the technical performance of consultants and suppliers is under scrutiny.

Consultancy skills

Consultancy skills demonstrated were apolitical and independent. In case A, each department was thinking in tactical terms that might not support the island government's five-year business strategy whereas the consultants were apolitical. The consultancy CEO asserted that his consultants '*cut across the grain'*, suggesting the interesting perspective that good engagement needs to be counter cultural. In challenging in this way, case A had some similarities to the central government case D, whose suppliers apparently had a different culture to the commissioning department. On the evidence of the cases, bringing in an external perspective appears to be a key consultancy skill, and supports existing literature (NAO, 2006c).

A consultant's avoidance of internal politics and provision of an independent perspective arises in case C and E as well. In case C, the choice of an external consultant was deliberate in order to avoid accusations of ISD bias, and in case E, the consultant argued that his

interviewees saw him as independent. It is interesting that the consultancy PM in case B also mentioned that he could sometimes be caught in the internal politics, and his CEO said he avoided internal politics. Cases A, B and E had explicit mention of internal politics that the external consultants attempted to avoid, yet at the same time, IS departments could see places where the business departments could possibly be running their businesses better, using their IT systems to support business objectives, and such opinions were potential internal politics. In case D, there was no explicit mention of internal politics, although there was evidence that the supplier provided an independent perspective when the engagement lead wrote a memo to the group commercial director comparing two programmes, one that was going well, from which lessons could be learned for another project that was in trouble.

Cases C and E had similar requirements of a single consultant on a short-term project. In both cases, the manager perceived the consultant's ability to work without needing to be micromanaged. However, in case E, managing stakeholders and communication skills was part of the remit, and so the consultant had security clearance and was expected to sort out the logistics of the interviews for himself, unlike case C, which required the IT support to organise the meetings, their place and time. As they were similar projects, at similar prices, perhaps the ISD team in case E got the better bargain. This is interesting because the case E ISD team were managed by an ex-consultant, who knew what skills he expected of a consultant and what he should be able to trust him with, as well as what to task him with. In addition, there is clear evidence of continued client interaction beyond procurement, interaction that resulted in the required report and informal skills transfer. In summary, key consultancy skills require proactive, credible performance without client management, with an apolitical and independent perspective.

Procurement skills

Procurement mattered in cases A & B. In case C, time was spent procuring the right consultant and in case D new procurement was avoided through keeping the incumbent suppliers with a new contract.

Trust influences choice of procurement, and requires reliability or credibility. In case C, the IT manager knew that if the consultant was not going to be credible then the stakeholders would not trust him, and thus she reasoned, they might reject the consultancy report. Hence, the IT manager discarded the original choice of consultant in favour of the more credible consultant. Relationship management skills are necessary at procurement as well as at later stages.

Key features of expertise

The quality of knowledge that participants bring, matters together with participants' willingness and ability to contribute it. In cases D and B, there is evidence that business users had difficulty articulating their knowledge, and in case D, there was evidence of hesitation and unwillingness. Difficulty, hesitation and unwillingness on the part of the client affected emerging behaviours. This issue of willingness to contribute and a desire for something to work (Ostrom, 1996) is necessary for the emerging behaviours together with continued interaction on the part of the client.

However, it may be that the professional service provider, whether consultant, or IT supplier, did not have the requisite skills to elicit the knowledge from less experienced clients. For example, in case B, the BSM was new to the job, the business department had no previous experience of IT project development, and the lack of knowledgeability manifested itself. It is clear that both consultancy participants and client senior management attempted to influence and persuade the BSM of the project process, and his unwillingness to go along with them caused difficulties.

6.3.3 Participants

To be able to contribute expertise, it is necessary to participate. In addition, the participants need to be the appropriate participants who can contribute what is needed. An interviewee from an unassigned case study indicated that incompetent supplier participants would be an issue.

> *There were one or two people who were brought in who were not competent. It became obvious within three days. So they [the suppliers] were told, "we think there's an issue here". That same afternoon, they took them off. The following day, they were replaced [client PM]*

In case D, there was evidence that, in the first scenario, clients had not participated:

> *Clients weren't, when they were working on projects, they'd never be on the project boards. "When we have the project boards, then we'll tell you what to do and we're not going to share the view that..." all the discussions, the rationale, which can even be instructions and, you know. [Case D, IT user director]*

This is an odd assertion, because PRINCE2, which is the government methodology, requires a client representative on the project board. Lack of client participation was symptomatic of lack of engagement in scenario 1 of case study D.

People can participate without having a mutually agreed goal, rather they have to participate because it is expected of them, as this extract from the case B project initiation document might imply.

> *Key stakeholders (e.g. Police) will participate in workshops to investigate and agree their needs in relation to the VRLS system. [Case B, PID].*

The expectation of participation may be justified, and the participants do have something to contribute, and want to contribute. However, participation does not necessarily entail contributing. In case B, for example, the director was a participant. He described his role as one of governance and of oversight because he was on the steering group, on a governance structure similar to that required by PRINCE2 methodology. However, the customer services manager took over his place as a customer representative on the steering group, which means although he still had the governance role, he was not an active participant. Similarly, the fact that case D clients did not participate on the project board may imply nothing about engaged behaviour. Although participation may drive engagement (Marcum, 1999), and participants must be present to participate (Barki and Hartwick, 1994b: 74), participating behaviour may be necessary but not sufficient for engagement and participating may not be an engaged behaviour, but there may be different levels of participation some of which tend to afford engaged behaviours and others do not.

The descriptive matrix at Table 5-2 on page 220 in the previous chapter shows issues of participants and that sometimes they change partway through a project. When participants change, then the behaviours change and it seems reasonable to assume that a change in one component of the model might affect other components. This assumption will be followed up in the next sections.

In both cases A and B, in the same government organisation some three years earlier, there had been problems where business departments could not get ISD to do work, and business objectives for ISD work did not support overall government policy. A change of participant with the arrival of the ISD CEO and his choice of consultancy resulted in a change of approach to running projects. Then, the consultancy came with advice on changing project methodology and procurement of contractors, advice that the new ISD CEO implemented thus manipulating the environment. It needed only the one senior manager to change in order to change the environment and thus change behaviours.

Overall, clients initiated interactions with each other, and consultants interacted both with clients and with each other, becoming accountable to each other for their actions (Billing, 2009). However, occasionally clients missed opportunities to interact with consultants, as shown in Table 6-2 on page 238 with detailed examples of each case in Appendix 17: tables of actions for engagement. The omissions of clients' actions, by reasons of *being* omissions do not easily show in such tables of client-consultant actions. Feedback from the case C IT manager about having given the consultant a get-out clause implied that had she initiated further interactions after procurement, her organisation might have gained more value from the consultant.

Table 6-2: participant actions for engagement

(NAO, 2006b)	With client staff on project	With consultant staff on project
Actions clients take	✓ .... in order to ensure client staff are committed to the project ✓ Positive actions (cases A,B, C, D2 & E) ✓ Be clear about the aims of the overall project ✓ Positive actions (cases A,B, C, D2 & E) ✓ Prepare the ground for the use of consultants ✓ Positive actions(cases C & E) ✓ Maximise value employees can add ✓ ✖ some problems in B and D1	✓ …. in order to ensure consulting staff are committed to the project ✖ Opportunities sometimes missed in cases C, D1 ✓ Exchange information with key suppliers ✖ Opportunities sometimes missed in cases B and D1
Actions consultants take	✓ Actively involve client staff ✓ Positive actions (cases A,B, C, D2 & E)	✓ Change the attitude of consultants towards clients ✓ Positive actions (cases A,B, C, D2 & E)

A circle = neutral action, a tick ✓ = positive action, a cross ✖ = negative or lack of action.

Summary of participants

Participants may willingly contribute to the project, and participants are necessary to a project. A change in individual participants whose contribution had not afforded engaged behaviours can result in a change in components of the environment, and then a change in behaviours.

6.3.4 Summary of conditions

The role of the conditions appears to be to allow participants' sharing, sense making and adapting behaviours to emerge. The environment encourages sharing, participants participate in sharing, and they contribute expertise that helps sense making. If conditions exist, then the behaviours can exist; for example, an interactive blog allowed sharing.

Materiality of physical or virtual context in which people work (Orlikowski, 2006: 465) is useful because it gives participants something to work on, share, and talk about together, like they used the log book in case A to record what they were doing, and they used the blog in

case D to discuss and feedback on the supplier's performance. In case B, they used the ISD methodology and governance structure to settle issues. Materiality seems to be important to bringing participants together with something to share, thus supporting Orlikowski's assertion that "human knowledgeability is inextricably entangled with materiality" and that materiality structures knowledgeability (Orlikowski, 2006) . This finding supports recent work on how consultants use materials (Skovgaard-Smith, 2009) and on sense making that uses materials (Werkman, 2010, Beers et al., 2006).

Participants reflected on their organisation's culture, which might be an emerging category related to environment or an emerging explanation for what underpins adaptability. Participants through sharing and sense making can adapt their own environment. That indicates interaction between the behaviours of sharing, sense making and adapting, and will be discussed in the next section.

6.4 Research question 3: how do conditions and behaviours interact?

As described in chapter 3, behaviours and conditions were coded. Recognising that there was some kind of interaction between them, the researcher aimed to identify behaviours and conditions that were similarly coded. Each numbered interaction in Figure 6-1: model V1 was analysed by matching double-coded data, that is data coded at each end of the connection, for example participants and sense making. The results were examined, crosschecked across cases, and considered with the aim of identifying meaningful combinations of dyadic interactions, case study examples of which were discussed in chapter 5. Figure 6-1 on page 240 shows interactions between conditions and behaviours that were identified in the in-case analysis of chapter 5. This next section will draw together similarities of interactions across the cases.

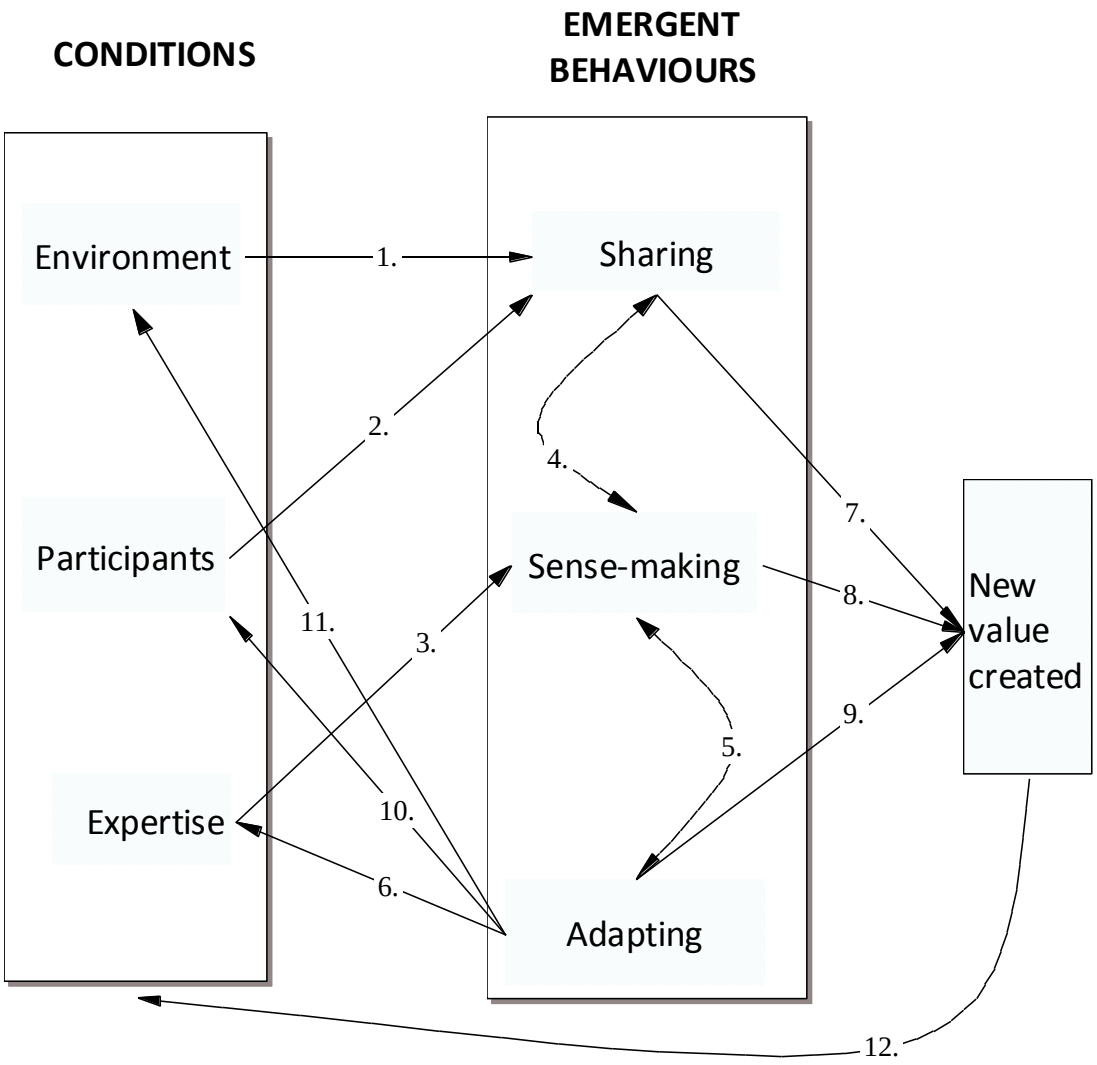


Figure 6-1: model V1

6.4.1 Cycles of engagement

The conditions and emerging behaviours combined and influenced each other, so that cycles of actions were set in motion between participants who shared materials, time, place and environment. It was also realised that the behaviours interacted, the interaction between sharing and sense making being of particular importance.

Sharing and sense making

By sharing materials in their environment such as mock ups in case A, documents in every case and the blog in case D, participants made sense of each other's requirements. Nonaka calls this process of creating tacit knowledge through shared experience "socialization"

(Nonaka, 1994: 19) and one of the characteristics of sense making that Weick (1995) identifies is social contact. Through social contact, technical contractors and consultants elicited information from clients.

> *We're trying to get the requirements for this tax system and the way that we're doing it is I'm mocking up screens as to how things could look, and then I'll go to a meeting with them, sit down for two or three hours [...]. I'll do some more mock ups for the next meeting and then round and round it goes [Case A]*

The comment suggests a sequence that first the participant identifies knowledge required, then creates screens as artefacts to share with the client, shares them in a meeting, implying gaining further knowledge of requirements then iterates through the process again. This is iterative interaction, and the iteration strengthens the interaction.

Participants made sense of each other's requirements by sharing time and space with each other. For instance, both the case A consultancy CEO and the case E consultant said that they preferred to meet face to face.

> *Face to face 99% of the time, because the work I'm doing is influencing to a large degree it would be quite difficult discussions I choose to do it I'd avoid anything else. [Case A, CCEO]*

In case C people enacted sense by getting something on paper

> *It was the first time somebody did actually get down on paper a [...] whole picture of what people wanted [IT user]*

That whole picture helped the individual participants to see each other's perspectives instead of each their own bit of the picture.

How clients participants help manage their external service providers to make sense of their requirements after the initial procurement is not always clear. One way is for providers and clients to meet repeatedly, as in case A. However, consultants help the clients to manage their providers. For example, the case B consultancy PM identified stakeholders and anticipated what would make them positive about the project. The case E consultant met face to face so he could express belief in his interviewees' opinions. In another example, the case D engagement lead met and talked with his client counterpart to listen to his concerns and react to them.

Sharing and sense making require regular times and places to meet, which project board meetings provided in case B. Shared boundary objects facilitate sense making, such as the reports being created for the consultancy projects of cases C and E, and the new interactive blog in case D. These times, places and objects allowed participants to share knowledge iteratively, building up on knowledge, not only for the project but also of each other's objectives.

> *Try and hammer it out and agree on something and then it just repeats [Case A, developer]*

This quote indicates the effort and repetition required to agree something.

With better understanding of each other's objectives, it became easier to build relationships. Relationships made it easier for participants to persuade each other of the relevance of their views, and sharing boundary objects helped participants to make sense of views. However, internal politics prevent this sharing and sense making behaviour.

> *Between the IT area and the business area, there was a very political undercurrent, which said, therefore don't start stepping on people's toes [Case E, consultant].*

It is not clear how sharing or sense making behaviour can address problems of internal politics, but being 'other' (Kipping and Armbrüster, 2002) and engaging differently with each client participant seems to help a consultant's work. Here the consultant seems to be saying to be careful what is shared, and a consultant needs to know the politics within the organisation, bearing in mind that the client he is responsible to is the one who is paying, and the primary interest. In this case E, ISD is paying him, and an implication is that ISD is saying the business is supposed to deliver these requirements, and they have not been delivered, which could embarrass people. This interaction between these two behaviours seems particularly important, perhaps because of the iteration between them. However, another important feature of these cyclic behaviours that emerges is the growth of trust.

Trust

Nahapiet and Ghoshal identify trust as a component of the relational dimension of social capital (Nahapiet and Ghoshal, 1998). This was not included in the initial model of

engagement as it was assumed that trust could not exist until relationships were built, so could not exist in a situation where participants had not known each other before. Yet, as the projects were analysed it appeared that the dynamics that develop as sharing leads to sense making include trust. Case A ISD public servants shared their plans with their trusted contractors, but case D participants saw sharing as a risk to public sector security and to supplier intellectual property. "Trust requires the presence of an element of risk and mutual interdependence" (Arino et al., 2001: 110). If project participants recognise mutual interdependence, then they may be able to act in each other's interests, and this reduces time required to build relationships (Arino et al., 2001). The case studies suggest that trust was essential in order for people to share.

> *What really makes these types of relationships work, because I'm dependent on [Supplier] to deliver a service, is the trust and the ways of working with your supplier [Case D, ITDD]*

Trust does not exist to start with, and is difficult to establish, especially as the consultancy industry is not much trusted, as the case A consultancy CEO avers:

> *There is such a high level of suspicion of consultants and they have such an awful name [...] There is a great deal of suspicion whether in public sector or private sector around that as an industry. [Case A, Consultancy CEO]*

Organisational culture sometimes needed changing in order to get the trust throughout, and in case D, that was not an easy change.

> *I've worked in a number of programmes in the public sector, and it's been very difficult to get that mutual respect and honesty, and there's always been a mistrust on either side, [Case D, S-AD]*

That sentiment echoes those of the consultancy CEO in case A. Openness was also necessary to build trust.

> *What's critical to the relationships is that we get it right, is that it's open [...] As soon as you lose that trust, as soon as you lose that ability to be absolutely open, [...] you're dead in the water [Case A Consultancy CEO]*

In some environments being an outsider helps build trust.

> *In a political environment, where the project you're working on, people might have a mistrust about that project from their viewpoint, and sometimes I use the fact that I'm an external consultant to my advantage [Case E, consultant]*

The clients might mistrust management's reasons for the project, suspecting internal politics, but trust the independence of an external consultant. Another apparent difficulty is that it is possible to build trust with only a limited number of people.

> *You don't develop it with everyone it's probably only 50 % of the people you can trust, that you can really develop that kind of relationship with, but as soon as you lose that, you're dead in the water really. You can't really do anything [case A, CCEO]*

Similarly, the supplier engagement lead of case D, also suggested that not everyone could build trust.

> *Unfortunately, you don't have that many people who can take it up a level, and really engage collaboratively and get, and build that trust. You have to start with someone, you have to start by showing you're building credibility, and that doesn't come overnight, and then you have to, you can build on it [Case D, S-EL]*

This is interesting because it implies that sometimes it is necessary to change participants in order to find the right people with whom to build trust. The case studies showed evidence of changing client participants, and some ad hoc informants revealed consultant participants were sometimes changed. Mentioning a political environment implied that there was a lack of trust, and something was required to compensate for trust and to handle the internal politics. In both cases C and E, the consultancy task required interviewing stakeholders from several different departments with different perspectives, values and aims. The consultants in both cases anticipated the political environment recognising that the client group was heterogeneous , and used their 'otherness'(Kipping and Armbrüster, 2002) to present an objective report that the various parties could trust to be independent. A less independent consultant might be able to engage with parts of the client system, and not others.

An outsider who can share analysis with senior client stakeholders can move projects on, as this quote shows:

> *"That was a really good piece of analysis and [the client] sent that to more senior peer colleagues on the basis of, we need to do something about this. It isn't just [supplier x], it's us as well, and what that led to was a clearing of the air between seniors on both sides [Case D, S-AD].*

Performance that met expectations led to 'the clearing of the air' that provided the openness that helped to build trust. Credible performance allows clients to rely on their consultants and suppliers' expertise, and credible performance was necessary to build trust, as the following users said.

> *You build up a lot of trust because they're experienced and they know what they're talking about [Case B CSM]*
>
> *She had built enough trust with me and her approach was clear enough to me that I could very easily buy into (Case C IT manager)*
>
> *The trust comes from doing, being bold, listening hard to what the client wants and making as much of that happen as is feasible for you as an organisation, both on a commercial basis, on a financial basis and on a programmatic basis [Case D, S-AD].*

Here in case D, performance happens because the supplier has listened and made sense of what the clients want before delivering, rather than delivering what the supplier thinks is wanted. To make sense it was necessary to have open and honest discussions

> *And they understand your world in relative terms to their world, [Case D, S-AD]*

The consultant or supplier initiates this trust building behaviour, not the client. Once the performance is proved, then the relationship gets easier, because the client trusts the supplier rather than querying reasons for doing something. Trust has other consequences. For example, having trust in stakeholders, means being able to empower them:

> *The guys on the ground that are actually delivering have a relationship where they're empowered to make certain decisions, and that has to happen all the way up the organisation and we have to build that trust in the relationship … [Case D ITDD]*

Building trust draws out sharing, and sharing draws out trust, so there is a cyclic process of self-reinforcing behaviour (Vangen and Huxham, 2003), shown in Figure 6-2: model V2, trust appears to be an attribute of sharing.

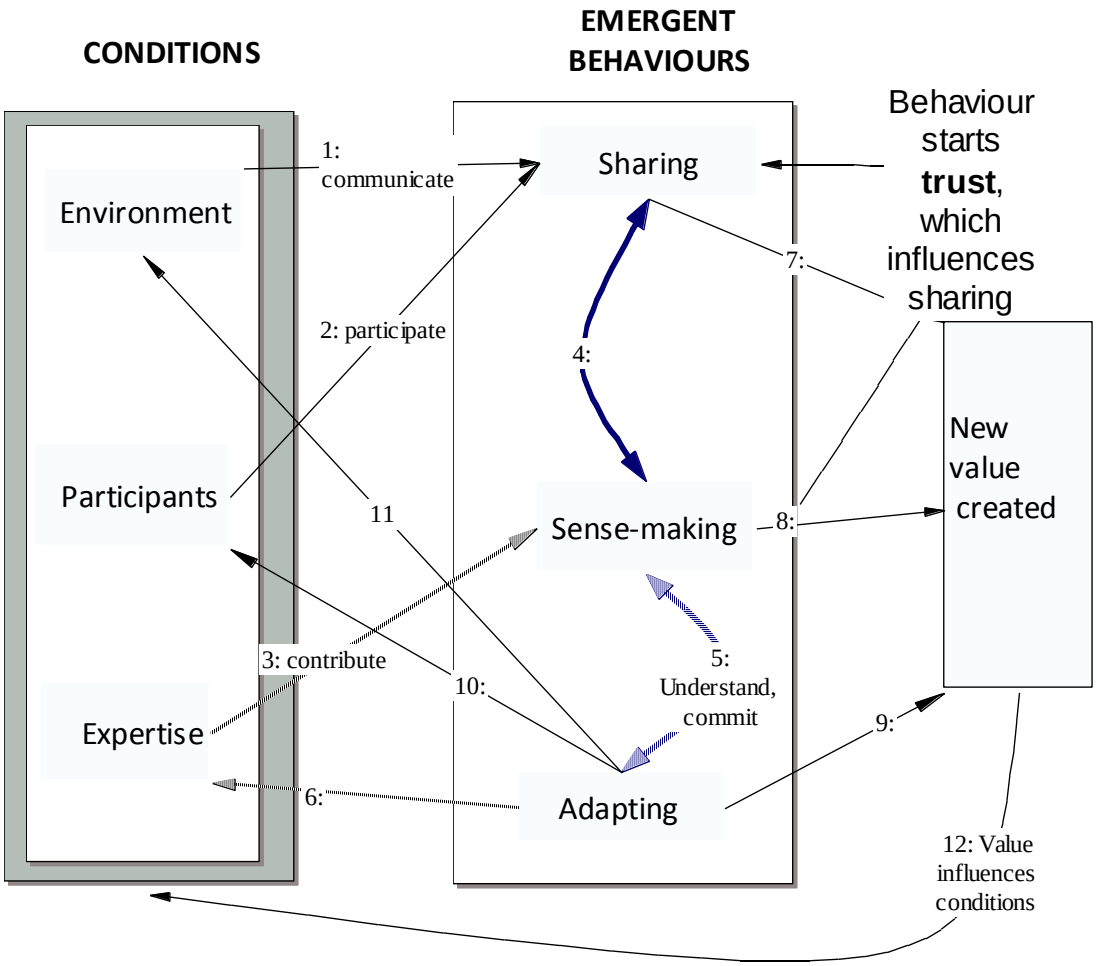


Figure 6-2: model V2a

In summary, performance as expertise that is contributed to sense making seems to be a condition that allows trust to emerge; the parties expect the other will perform a particular action (Mayer et al., 1995). Trust can take different forms, meeting expectations of delivery, or providing an independent view. Figure 6-2 shows conditions, emerging conditions and the feedback between them. The connecting arrows indicate the feedback nature of the behaviour where the emerging behaviours create more behaviour that is similar. Analysis of both ends of the connection revealed actions that influence the emerging behaviours seen in the model.

Sense making and adapting

Sense making and adapting addresses the problem of the struggle that the business departments have to understand how IT strategy can support business strategy. IT strategy ought to support business aims, thus providing a competitive advantage (Porter and Millar, 1985). Understanding strategy seems to be a problem for some business departments, though it is not clear why. In both large systems development case studies, A and D, the suppliers or consultants commented that the business clients did not seem to realise that their systems development ought to further the overall business aims.

> *We're all talking IT perspective about strategy yet the departments can sometimes struggle to understand strategically where they're going and that's clearly a problem [Case A, CCEO]*

One of the functions of the island's ISD is to carry out business case analysis, which is another reason for their chosen methodology because, like the PRINCE2 methodology it ensures that no project can start unless there is a business case that identifies expected benefits. That could require the business departments to make a business case for IT development and for any subsequent changes. In case D, the supplier would query the business case:

> *HR, for instance, come along at a certain point and say, we'd like to do this. Oh, yes, but where's your business case for potentially disrupting the programme at this point in time? And where's the money going to come from, because actually we have agreed a budget, you know, so if you want to do this now it's going to cost you a little bit more money, and do you have a case for it?*

The island ISD investigates and measures new requirements comparing costs to benefits over time.

> *So "what's the cost" versus "what's the benefits"? And, we try to do that in terms of so if we get a take up in first year, second year third year of X what kind of efficiencies can we expect from them? [Programme manager]*

The island ISD e-services manager talks to the government business departments about their intentions for on-line services and coordinates activities that include getting a robust business case before they can go into the programme of government service. However, departments can use externals to make the business case, and in case B, the software

developers understood the detail and complications of vehicle licensing so wrote the business case for them.

Adapting follows sense making as consultants adapt to the local culture.

Adapting to differences in culture and norms

Less tangibly, public servants had a culture that differed from that of the external consultants and suppliers. Client norms in some organisations appeared to include not being very good at change (case E), having a secretive culture, not sharing, not wanting to promise when not sure of being able to deliver, and being shy of saying what they have achieved (case D)

> *Tell us what you've done and tell us what you're going to do when you get here. No, I can't do that; I can't stand up in front of all those people, say that [IT UD]*

It seemed slow to outsiders:

> *You can see cases all around you where somebody, well, he's sitting at his desk, he's been told he's got ten things to do and you speak to him the following week and he's still got the same ten things to do. Speak to him a week after that and he's still the same ten things to do. And he's perpetually busy. [Case A, technical designer]*

This external contractor expressed unfamiliarity with this culture, opining that contractors tend to be more motivated and used to being put under pressure than civil servants. The external participants brought a counter-culture with expectations of getting things done. Consultancy norms included first saying what individuals had achieved, and being proud of it. The supplier account director of case D presented to his development team in order to encourage and praise them. Secondly, external professionals such as the technical expert in case A expected to get things done quickly. The consultants on cases A, B and D expected there to be a business case that supported the overall policy of the department, and if there was not one, then they encouraged their clients to identify one. Thirdly, these external professionals brought "*a wide view*" (case A, consultant) to situations where clients had only their internal experience. So, on the one hand, the independence of a consultant legitimates otherness (Kipping and Armbrüster, 2002) and the ability to transfer and change clients' knowledge (Kipping and Armbrüster, 2002: 219), yet on the other hand, otherness was a

burden for the case D suppliers in scenario 1, who had failed to understand their clients' norms (page 192).

Bringing together the norms of these two key parties, clients and consultants, required one or the other to adapt in order to achieve the required software development. Consultants adapted to fit in with the client, to cause them less work, take less time for instance. However, they also insisted that clients provided time and effort to achieve together. For example, in case C, the project initiation document included a clause that the client should handle documentation in a timely fashion.

> ***The council needs to provide […] turn round on reviewing documents in line with the schedule*** [case C, PID]

If clients do not adapt, eventually their consultants give up, as scenario 1 in case D demonstrated:

> *They [the suppliers] didn't want to perform badly. It had got to a point where they [were] pushed from pillar to post by various people, not joining up on our side, and, you know, you give up after a while – "I'll just do what I'm told" [case D, IT UD].*

Consultant informants saw established norms in client organizations as an important factor in understanding project success, and recognized they needed to work with the organizational culture in order to engage with their clients. In case D, client participants began to discover similarities:

> *Some of the challenges that they face aren't that different. The only real difference is that they're motivated obviously by shareholders and a big profit okay but some of the other values that they have are absolutely the same as our own [ITDD]*

For example, in case B, participants learned as they moved data from the old system to the new:

> *We made a number of trial migrations we realised that the data in the old system was a terrible, terrible swamp so one thing that became evident was that there was a need for a data cleansing project once this system went live. [PM]*

The experience gave them cues to realise a problem existed, and thus to plan their future workload for a new project.

Adapting behaviour also addresses the problem of a participant who cannot make sense of what another participant is explaining, so the other participant needs to adapt behaviour or environment in order to persuade and influence. Such an example is in case B, where the BSM could not see the same objectives as the consultancy PM, so the project manager took time to identify stakeholders' needs, and to make and keep contact with the BSM. In case D, the supplier adapted its performance after discussions with the client made expectations of both parties clear, that is, they made sense of each other's expectations. Participants can adapt themselves or can adapt their environment. The earlier discussion of norms and culture indicated how adapting could influence the environment and that one party could adapt in order to attain goals, though it was not necessary for both to change. Sense making happens before participants adapt. Solutions require time, discussions and effort that demonstrate commitment.

Threads, wedges and banners

Particular patterns of interactions emerge and this sub-section will point them out, naming cycles as threads, wedges and banners because of the shapes they create in the figures. In Figure 6-3 below, adapted from case B, the double-headed arrows of sharing - sense making – adapting have been emboldened to show how they weave between the behaviours like threads, and by iterating, sew the behaviours together more firmly.

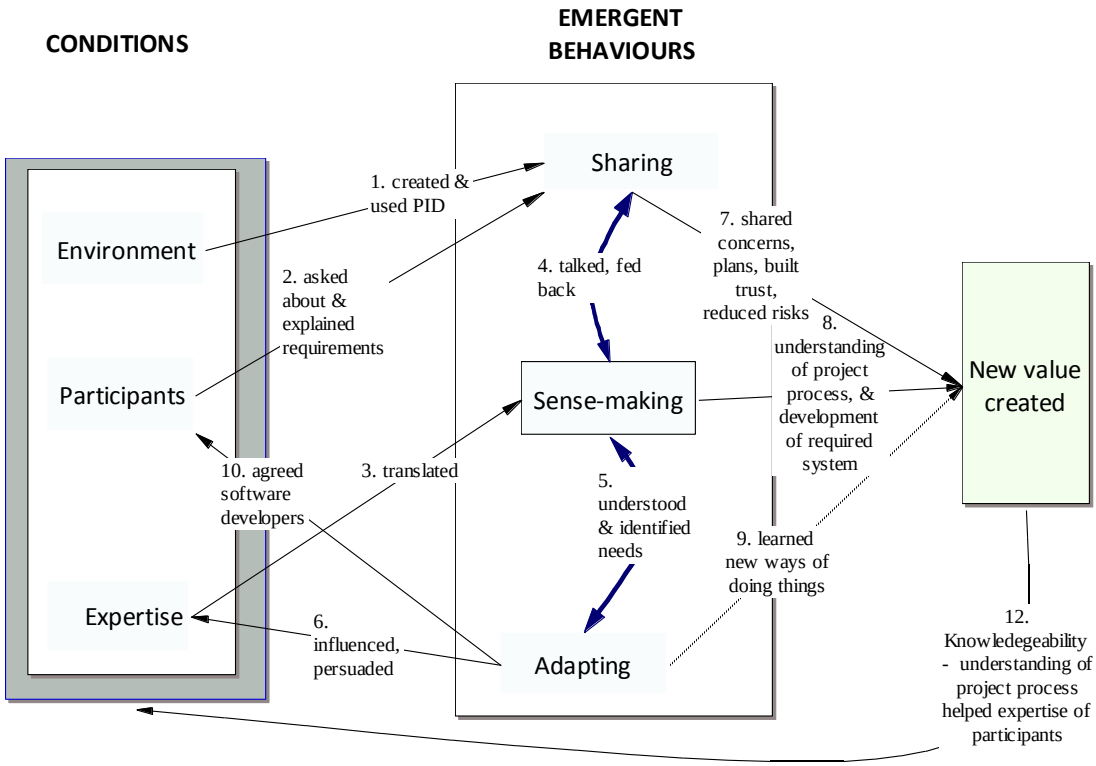


Figure 6-3: threads - B

Cycles that control the conditions emerge from behaviours and reveal more patterns. One cycle is shaped like a wedge; the expertise - adapting interaction is such a pattern. In the expertise-initiated wedge cycle of arrows 3-5-6-3 expertise is contributed for sense making that leads to adapting that itself influences expertise. When expertise initiates the cycle, then it wedges open the continual cyclic behaviours of sense making and adapting. This interaction is interesting because adapting behaviour changes expertise, influencing, persuading, matching participants' styles, transferring knowledge and skills, which enables participants to contribute more expertise. The wedge cycle is shown in Figure 6-4 below, adapted from case E. The connections representing interactions 3, 5 and 6 between sense making, adapting and expertise have been emboldened to show a wedge shape.

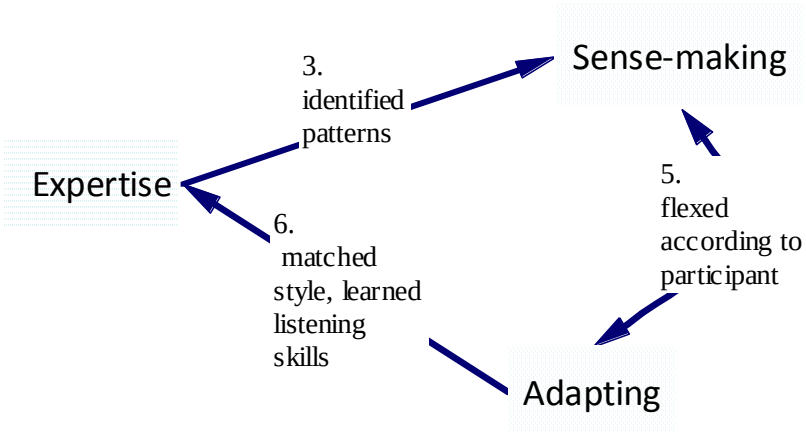


Figure 6-4: wedge cycle

A more complex pattern involves the central thread and an example is shown below in Figure 6-5: banner cycle – participant initiated. The cycle is similar to the shape of a banner. This cycle is adapted from case B. where the connections representing interactions 2, 4, 5 and 10 between participants, sharing, sense making, adapting and participants have been emboldened. The participant condition initiates this cycle, and requires the central thread that revives and strengthens the cycle between conditions and behaviours repeatedly.

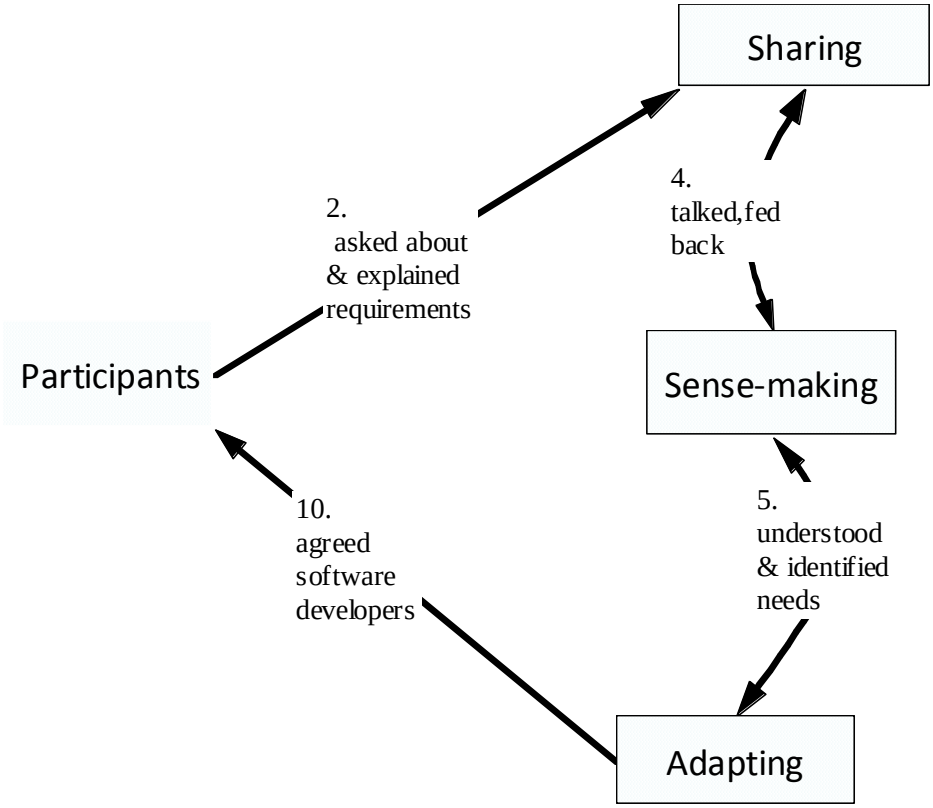


Figure 6-5: banner cycle – participant initiated

Other banner cycles can be found that start from different conditions but still require the thread. For example, environment can start a banner, as shown in Figure 6-6 below, adapted from case study D.

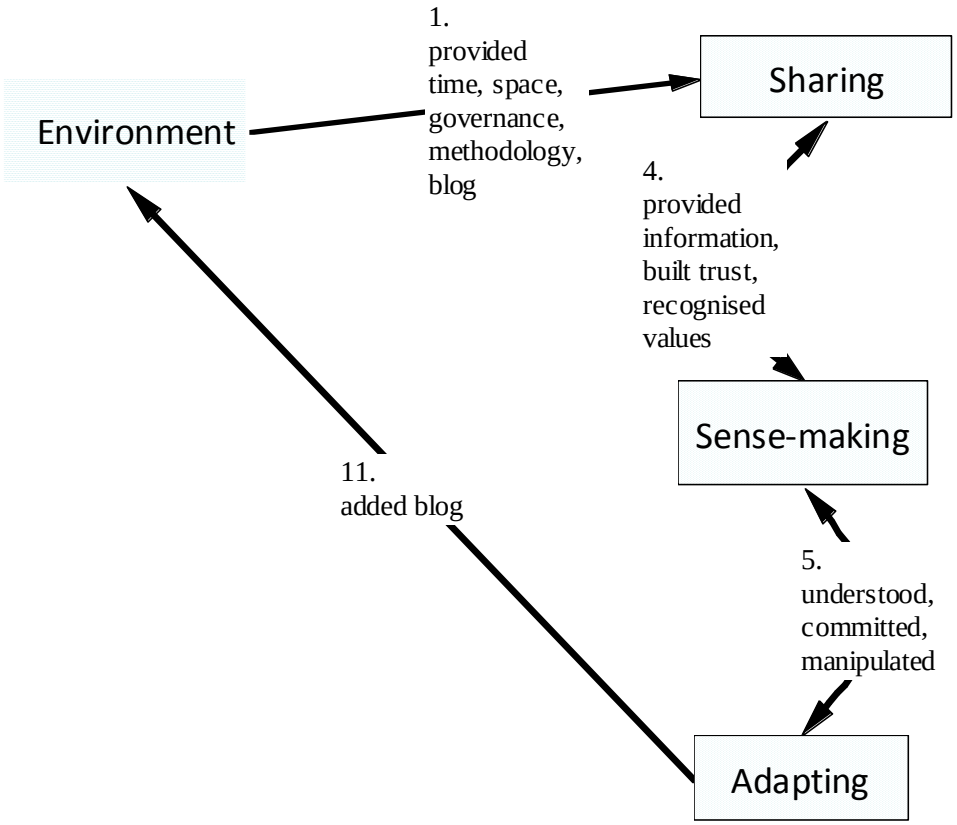


Figure 6-6: banner cycle – environment initiated

These sharing behaviours help engagement by improving sense making, and this leads to adapting. More sharing and sense-making behaviours seem to lead to improved engagement. Such sequences of behaviour are often circular. For example, through a shared logbook, case A participants made retrospective sense of cues available (Weick, 1995) on a development problem, and adapted their IT environment because of what they understood, whilst noting their actions in the logbook. This makes a cycle that can be numbered, following the numbers on the diagram as 1-4-5-11-1, that is, environment - sharing – sense making – adapting – environment. A different banner cycle that is participant initiated is 2-4-5-10-2, where participants share, make sense, adapt the participants, which is what happened in cases B and D.

A banner cycle can start another cycle. For instance, an environment initiated banner cycle can kick off a wedge cycle, as shown in Figure 6-7.

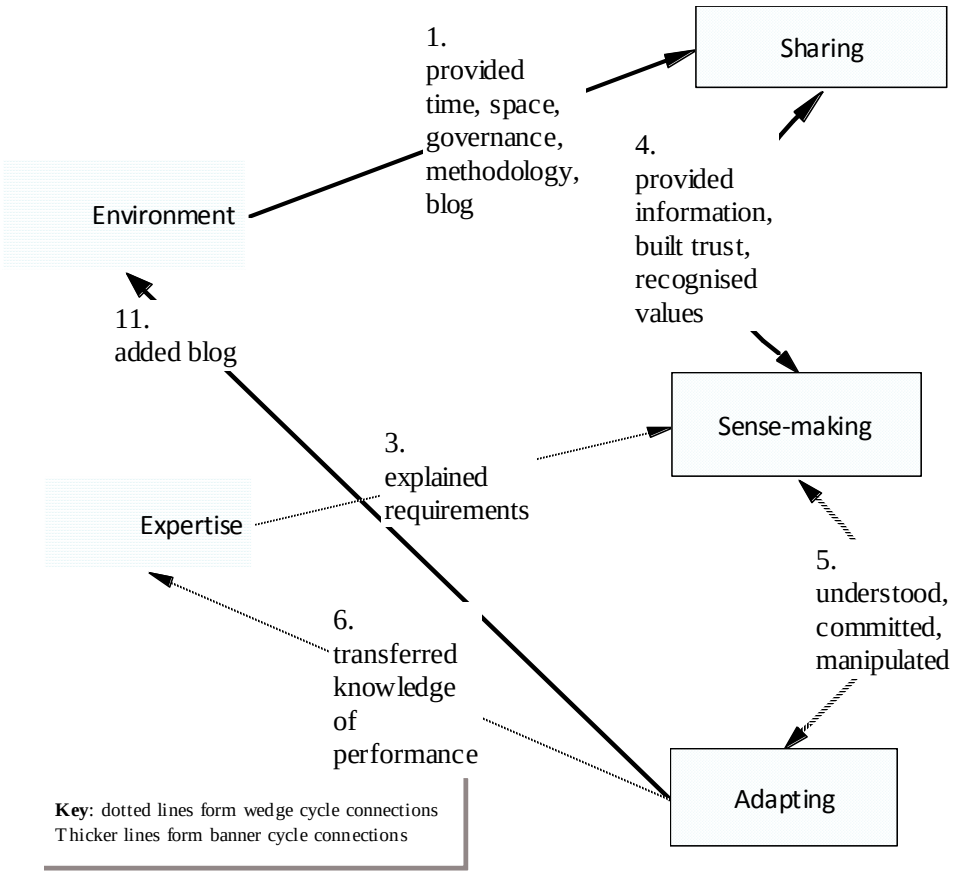


Figure 6-7: banner & wedge cycles

Alternatively, one banner cycle can start another banner cycle as shown in Figure 6-8, taken from case study D.

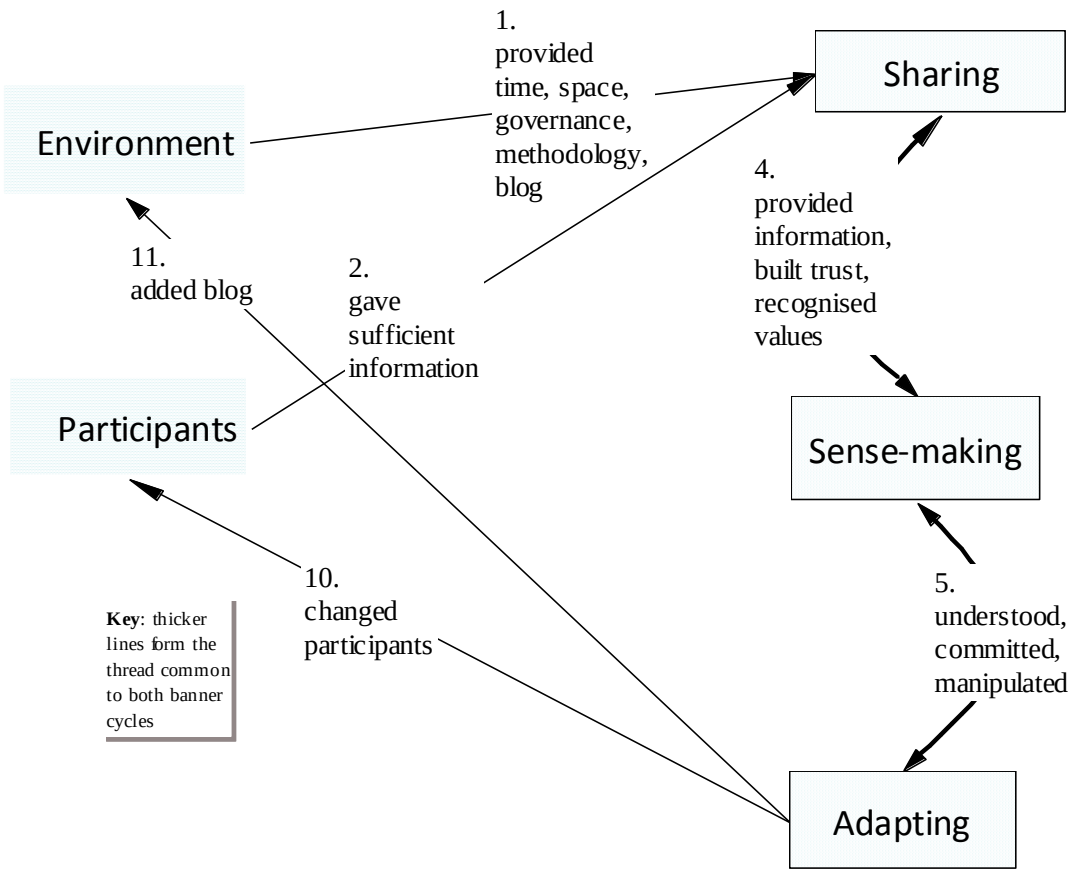


Figure 6-8: two banner cycles

In case A, the behaviours interacted with the conditions to create the wedge cycle built a spiral of engagement. One cycle can lead to another as in case B, where the banner cycle 2-5-10-2 could lead to the wedge cycle 3-5-6. Case D, scenario 1 illustrated a static and unhappy scenario, but an environment initiated banner cycle may have bootstrapped engagement, so that other cycles such as the expertise wedge cycle continued, thus creating a second and successful scenario.

Once sharing and sense making allow adapting, then there is the ability to alter conditions, which alters the behaviours, which in turn can alter the conditions, and implies that engagement is a dynamic, self-replicating phenomenon. Conditions seem to afford certain behaviours that may instigate other behaviours, creating an autopoietic system (Maturana and Varela, 1992: 43) where conditions and behaviours become inseparable; they are mutually constituted.

The answer to the third research question of "how do conditions and behaviours interact?" is that conditions and behaviours interact through cycles with each other. The wedge and banner cycles are important because once started they initiate other cycles, which reinforce engaged behaviours with the thread necessary for all cycles. Recognising the cyclic nature of engagement suggests ways that managers can enact and control engagement.

Engagement seems to create and strengthen working relationships; participants can alter conditions to produce better relationships, and thus control whether further engagement emerges or not. This implies that if senior management want engagement, then behaviours to encourage are sharing and sense making. Part of engaged behaviour seems to be being able to shape the conditions that produce further engagement, which suggests a leadership role for clients and consultants. This allows the consultant or manager to assess participants' engagement with each other, and decide what can be done to improve it. Participants, particularly senior management could adapt the conditions, which could alter sharing and sense making behaviours. Thus, participants have control over whether engaged behaviour emerges or not.

Interactions exist between the conditions and the behaviours. Sharing and sense making behaviours allow participants to manipulate the conditions, and adapt them, for example, changing participants to those more able to contribute, or changing material artefacts like setting up a blog, to allow participants sharing behaviour. Sense making seems valuable prerequisite behaviour to adapting because it manipulates knowledgeability allowing participants to acquire and use new expertise and skills. Through adapting, key people reshape conditions, implying that it is not that conditions afford engagement, rather that there is a system of conditions producing engaged behaviours, which can then be made self-reinforcing through interactions. The next chapter will discuss what can be done to influence engagement.

6.5 Research question 4: what kind of value results from engagement and how is it produced?

This section first outlines the value that resulted and secondly it analyses how that value was produced, by looking at the interactions between value and the emerging behaviours to see how the behaviours produced value.

6.5.1 What kind of value results from engagement?

This section analyses what emerging behaviours of the engaged relationship produced value. The value of engagement could be described in terms of how engaged behaviours mean participants acquire better information and skills in order to achieve good value for money. Before examining what value results, it is necessary to consider project outcomes. Outcomes of each case study are shown at Table 6-3: outcomes on page 260.

Value emerges from engagement in all the cases as exchange of knowledge, skills and understanding, being thus an exchange of intellectual capital that has provided organisational advantage in often-obvious value for money outcomes. These values are suggested in the value box on the right hand side of Figure 6-9.

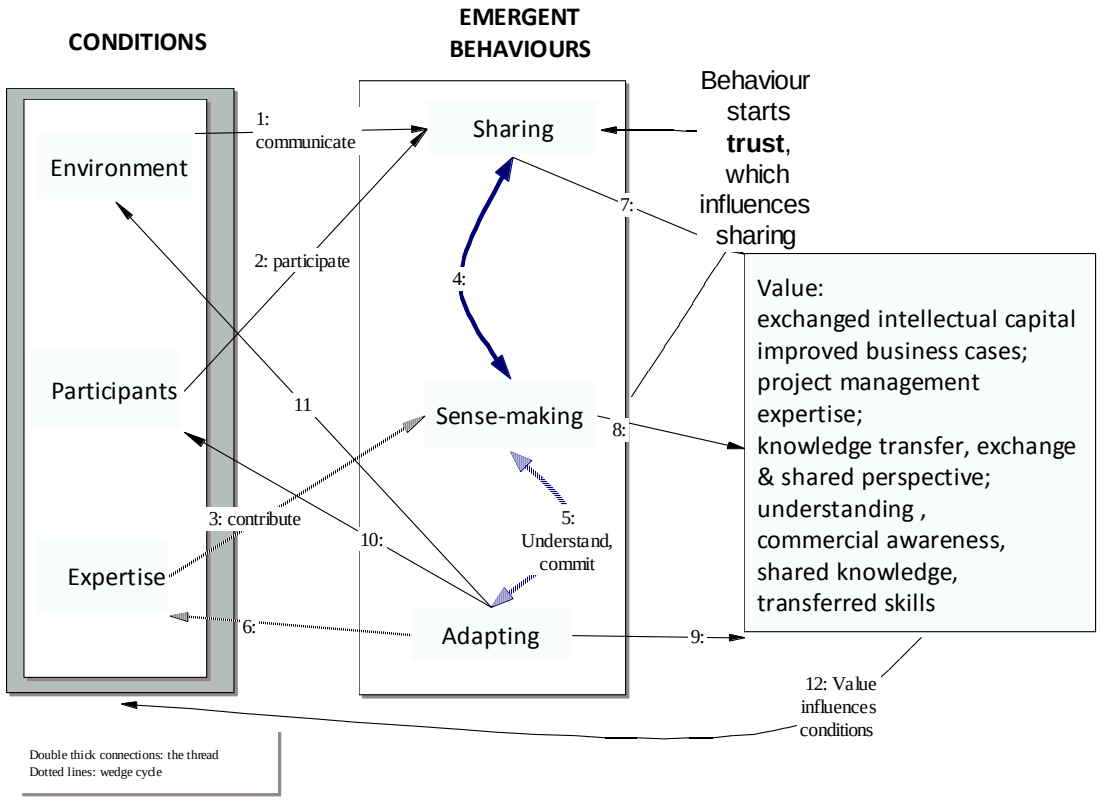


Figure 6-9: model V2b

Business cases for these studies split into two types. The first type of business case justified the project before starting and the second type justified changes to already-agreed requirements during systems development. Cases C and E used short consultancy projects to obtain information required to make business decisions on longer projects that are more expensive. The justification was made for procuring the consultant, and terms-of-reference documents explained expected outcomes, which proved of value in terms of what could be done with the information and what they contributed to future systems. Longer projects of system development as in cases A, B and D required regular re-assessment of the business case. In these cases, the consultant or supplier helped to make the business case, and chose the project methodology. The value of engagement comes from exchanging the knowledge required to make those choices.

Table 6-3: outcomes

Possible assessment criteria	Case A	Case B	Case C	Case D	Case E
Type of project	Systems development, with business cases that supported government vision	Systems development, with a business case to met current legislative requirements	Consultancy Business analysis to obtain knowledge of technical options at value for money	Systems development, business case supported government vision	Consultancy Business and systems analysis to obtain knowledge of existing systems in preparation for further systems development
Finish date	Programme does not have an anticipated finish date, so is not bounded in time,	Project started at a specific date and completed in November 2008, slightly over time.	Project finished to time	Programme started in 2007 and completed in early 2009. It achieved a phased timetable for three releases	Project was completed to time in spring 2009
Budget	Not known	Under budget	To budget	To budget	To budget
Output	Programme of on-line services that strategically modernised government business, & achieved policy objectives	A developed system to support law enforcement, increase revenue collection & improve efficiency through links with government systems	A report providing the information that the IT manager required to make a case	Programme of shared services	A report that identifies customers and services, and informs subsequent contract for over £2 million
Other benefits		A second project was set up to complete unachieved objectives.	Resultant information allowed negotiation of a reduction in supplier fees worth ten times more than the cost of the project	Successful delivery led to the government department saving 25% off its IT spending	

The second type of business case is more difficult in that its need arises part way through a project, and is unanticipated rather than planned. It requires justification of changes to already agreed requirements. The value of engagement in this situation is that trusting

participants can contribute technical expertise and business experience in order to realise the best way to adapt projects and still finish to time, budget and scope, rather than widening the scope and completing later, at more cost. Both cases B and D had participants who took this engaged approach, illustrating value in relationships that allow open discussion of such changes that deliver benefits or contain costs. Such discussion enables internal clients and external suppliers to debate the business case, the costs and the value of implementing the changes.

Nevertheless, there seems to be a tradition in public sector projects of changing requirements as a programme progresses, not only in case study B, but also in case study D. Moving the goal posts means clients never get value. Further evidence came from an informant who was an IT manager on another council project, not a case study, and complained about "*initiative after initiative after initiative*" pointing out that bigger projects tend to take 24 months to implement and by that time, policy has changed and consequently priorities also change.

> *Unfortunately, you know, we're an implementation organisation, so we're meant to implement government policy, but that changes so fast…you know, a lot of our big projects would take, well, I can tell you: about 24 months, possibly, to implement. You know, by the time that comes around, the policy has changed [ad hoc informant interviewee, IT manager in council]*

Continually changing requirements increases costs and reduces value for money. This type of business case justification requires the emerging engaged behaviours between key parties. Existence of these engaged behaviours might allay the concerns suppliers expressed to the Comptroller and Auditor General that

> ***"projects continue without regular assessment of whether the work is still of value and likely to deliver the expected benefits" (C&AG, 2010: 6)***

The value of engagement with external consultants and suppliers can be in stabilising systems requirements and reducing change during the project process.

6.5.2 How is value produced?

The model developed from the above discussion is shown at Figure 6-9: model V2b. The thread and the wedge cycles are shown through change in lines; thicker lines are used to denote the thread and dotted lines to denote the wedge cycle. For simplicity, banner cycles are omitted in this figure. Figure 6-9 shows the interactions from the emerging behaviours to value. Again, each interaction was analysed by matching data coded for the emerging behaviour end of each connection and value.

Figure 6-9 also includes a line from value to conditions to indicate the influence on conditions that the value created by the behaviours has. Such a line appeared in case studies A, B, D and E. The next sub sections will discuss each of the emergent behaviours.

How did sharing produce value?

Sharing brought value through knowledge exchange (case A), reduced costs (case B), increased commitment (case D), and saving time (case E). For example, in case B, the business systems manager gained knowledge from another island and shared it with his department and the government information systems department, to the benefit of the island.

> *If it hadn't been for [BSM] pushing and getting some comparative quotes and so forth we wouldn't have been challenged to look at this outfit in Island 1 [Case B, director]*

The costs of the new, alternative supplier were lower, so getting comparative quotes and sharing knowledge between islands according to the director turned out to be very good.

In case C, the consultant was trusted as an objective participant to draw together shared perspectives that led to the IT manager being able to negotiate down costs of the chosen technical option. In case A, sharing understanding with the consultancy meant '*the guys on the ground*' beginning to understand what strategy meant. The consultancy CEO gave an example of a business department that had been used to high volume requests for IT projects with immediate ministerial backing. Together with the consultancy and ISD, they examined their budget, and how many people each project would require.

> *There were over 40 projects on the go. We said, "Okay let's understand those and let's perhaps cut them back"- I think we initially said to key projects. So, we went through what was a very difficult exercise with them to be frank, saying "let's choose the seven. Let's choose against this strategy." We went through that. That was not altogether popular I'm sure you can imagine but we ended up with the seven. So we ran with that for two months. Then we said, "Right okay I can see from the seven that you've got here that you can't support these seven. The user department cannot support seven projects at the same time so we're going to put it down to four," which we did. Again, there was a lot of pain around that [...] let's not go back to our 40 projects that actually never delivered anything and everyone was getting very excited and there was lots of blame around. Let's get down to a small number of projects that can really be delivered and can really drive change throughout the organisation. The four didn't deliver so we were struggling to get the default commitment from the business for these four projects. [...] Let's recognise those but my job is to make sure you deliver against the strategy so what we're going to do now is we're going to put down I think we're down to two projects [case A, consultancy CEO].*

Working together, sharing skills and knowledge led to the department cutting down from 40 projects to the two critical projects on which to concentrate their resources, thus saving costs and ensuring that at least these two projects are delivered successfully.

The supplier's account director in case D wrote an analysis of the differences between two programmes of software development and shared it with the group commercial director, thus "*clearing the air*." It allowed clients and suppliers to share difficulties and tensions, which led to the next release being smooth.

> *We set down how we were going to do the next release, which again was a significant release. So, I think that was very much… if there is a key theme here, why did, what the challenge was and how the challenge was addressed, is leadership. It's the ability to say stop, you know, stop and let's just stand back and take stock of the situation, recognise what's good and bad, courage to have very open and honest, forthright discussions with the most, you know, the appropriate people at the appropriate level. Not down on the operational level, not the people causing the problems, but an appeal to the seniors, based on hard facts and, you know, honest opinion. And, on that basis we're lucky to have formed with the seniors' clients' side and we took action on both sides. So, the next release kicked off, we'd get together with the senior responsible officer [...] and, the teams, respective teams, reflected on why it was so bad previously, looked at how we can do it better and agreed the way, that was the way to do it, set about it. And, that release that followed on from [that...], went live [...] without a squeak.*

Figure 6-2 shows the development of trust from sharing, and that trust encourages further sharing. This is interesting, because trust was not included in the initial model developed from the literature, where trust did not seem to be a feature of motivation, participation,

involvement or commitment, which seemed to be synonyms for engagement, yet trust emerges with engaged behaviours.

Sharing and trust reinforced each other, trust being a facet of the relational dimension of Nahapiet and Ghoshal's model of social capital. These case studies seem to support Nahapiet and Ghoshal's suggestion that "trust may open up access to people for the exchange of intellectual capital and increase anticipation of value through such exchanges." If sharing creates trust between project participants, then the value that arises from trust is also available from the engaged behaviour. The value that Nahapiet and Ghoshal suggest arises includes increased "potential of a system for coping with complexity and diversity," and "greater openness to the potential for value creation through exchange and combination." Sharing behaviour with trust allows participants to handle problems that are not amenable to project methodologies, and the existence of trust implies that participants are beginning to build and share social capital, and thus, following Nahapiet and Ghoshal's model, facilitating the creation of new intellectual capital. In summary, the value of sharing is in the creation of trust and consequent exchange of intellectual capital.

How did sense making produce value?

Sense making brought value through emergent knowledgeability (case A), understanding of project process and systems development (case B), smooth delivery of a software release (case D) and synthesised information (case E).

Sense making is essential to obtain value from sharing, because it allows participants to understand the problems that they are monitoring. In case D, the account director had made sense of cues to balance service and cost to his client organisation.

> *So, it's understanding us so that he can deliver the best type of service to us and that's the kind of value add that the management team bring [Case D, ITDD]*

Sharing and sense making are apparently strongly linked and iterative behaviours that reinforce each other. It has already been noted that sharing seems to create trust and that Nahapiet and Ghoshal suggested that trust might open access to exchanging intellectual

capital. This was evident in case B, where the users were diffident about their technical abilities

> *It must have been the very start I suppose we had to be reliant [Case B, user]*

However, with time they came to trust the developers,

> *we were never put on the defensive or upset being told like you can't have what you want really, which was fine you know and because of the way they said it and how they said it and because you knew them yes, you think right they know what they're talking about [Case B, user]*

In case C, sense making came from the consultant's report that made the options clear.

> *to get a direction in terms of suppliers going forward because the outcome might have been actually that it makes absolutely no sense whatsoever to stay with these guys, as opposed to the actual outcome, which was it will only make sense to stay with these guys if they can produce better prices[Case C, IT manager]*

The IT delivery director recognised that value comes from sense making. Making sense is a dynamic, iterative process that involves individuals continually. In a similar vein, the IT project manager of case E

> *I think the business has to feel it's getting worth, and I think it's very important. I mean, what IT can often bring to the table… we shouldn't be about, "no, you can't do that", we should just be about, "oh, this is what it'll cost if you're wanting to do that. Or maybe if you do it like this, it might be slightly better, you know, or it might be slightly… it might cost you less – have you thought of that." And that's the experience: that you're getting something [Case E, IT PM]*

Here, the project manager is talking as an internal consultant that provides IT services to the business departments of the organisation, and offering information so that the client can make sense of the options in terms of service against cost.

The cases show that sense making led to understanding strategy, to knowing requirements, to appreciating technological issues, influencing, persuading and negotiating with each other. Sense making produced new ideas, ideas on how to tackle issues, and how to handle each other. Being able to handle each other led to being able to achieve a project more easily and at better cost. In summary, sense-making behaviour seems to allow the exchange of knowledge that makes projects easier to achieve because the process becomes smoother, and costs are minimised as risks are managed.

How did adapting produce value?

Adapting brought value through business cases that supported vision (case A), learning of new approaches (case B), creating collaboration between two suppliers and manipulated environment (case D) and transferring skills (case E).

Adapting seems to have several influences. First, adapting allows participants to change the environment, or to involve new participants. Secondly, there is the possibility of changing participants. Thirdly, it transfers expertise, allowing participants to acquire knowledge, which might be similar to the exchange of intellectual capital that Nahapiet and Ghoshal expect from the use of social capital

Adapting seems to arise from sharing and sense making behaviours, and leads to increased commitment, which in some cases meant committing resources, or agreeing to take extra risk. Such adapting improved delivery of the IT project, and clients extracted more value when they managed their suppliers.

In case B, the director pointed out that because of the project, the department had become more aware of governance and the importance of getting project management right.

> *We have made an effort to use this project to get better processes for the future, the steering groups, meetings, it's always happened in the past. I think we've still got a way to go [case B, director].*

The director saw value in better processes meaning that the project would more likely finish to time and budget; hence, the value was in the optimum combination of costs and project quality.

Case D was the study that showed more adapting behaviour than the other cases particularly in that clients changed the participants, and added a blog to the environment.

The supplier side also changed its participants in the programme, and through making sense of their client's culture, adapted by matching.

> *What [account director name], I think, learns from us is that we do not work in a command and control types, we are a very consensual, feathery organisation and I*

> *think that working in this type of environment is very different and he is able to then match one to the other [Case D, ITDD]*

The emerging behaviours increase collaborative commitment to produce IT strategy that supports business strategy, more successful and easy completion of a project, whilst reducing risk, and exchanging new ideas, knowledge and understanding, in short, creating economic value through exchange and creation of intellectual capital.

6.6 Summary of behaviours, conditions, interactions and value

Case studies A and B demonstrated matches against the model shown in Figure 6-9, indicating that overall there was engagement between participants. Case A appears to be almost a blueprint for excellence, suggesting that this might be a normative model. Case B appears to have needed more engagement between participants, the extra interactions between components suggesting more effort. The other cases showed that effective engagement was able to extract value from a project that might otherwise have been less successful.

6.6.1 Behaviours

Engagement needs sharing and sense making behaviours that lead to consequential adapting. Business people, who have a number of requirements and are unable or reluctant to articulate their requirements to technical outsiders, face boundaries that require sharing and sense making, and external consultants acted as mediators to help cross those boundaries (Bloomfield and Danieli, 1995). That is interesting because engaged behaviours help to address those problems of inarticulateness and reluctance, when participants share and can cross boundaries to catalyse change. Senior management and the external consultants are mediators who can help the process. External consultants navigate through internal politics bringing a counter-culture that helps mediate between clients so they continue engaged behaviours that change conditions.

6.6.2 Conditions

Environment includes physical and electronic place and objects, time and aspects of culture. Willing and trusting participants share an environment and make sense of what they share. Contributing expertise is necessary. These conditions are necessary but not sufficient on their own. Engagement disablers include lack of time, constant change and consequent busyness. When participants perceive their time as better allocated elsewhere, when they are too busy, then they do not contribute their expertise.

6.6.3 Interactions

The cross-case analysis has interpreted the results of each component and interaction. The interpretation suggests that the developed model demonstrates what behaviour is required for effective engagement, and how to produce value from engagement. The developed model shown at Figure 6-2 on page 246 and reproduced in Figure 6-9, is extended and annotated to depict some cycles of engagement. It is interesting that all cycles contain the sharing - sense making – adapting thread that sews the three engaged behaviours together. Wedge and banner-shaped cycles can be initiated by conditions, a wedge cycle being expertise initiated and banner cycles included environment-initiated and participant-initiated cycles. It is also interesting that trust appears and grows.

6.6.4 Value

Sharing brought new knowledge. Sense making increases knowledgeability and is essential for obtaining value from sharing, because it allows participants to understand the problems that they are monitoring. Adapting allows participants to change the environment or participants, and that improves transfer of expertise. Engagement appears to provide an ability continually to acquire and use knowledge. Such benefits produce value though the exchange and creation of intellectual capital.

Some interesting findings appear from the analysis. For example, that good engagement may be counter cultural, and consultants may require heterogeneous engagement to deal

with internal politics of heterogeneous departments. Different levels of participation seem to lead to different levels of engagement and it may be wise to change participants.

Finally, the literature review suggested that since projects are one-off and temporally bounded their participants could not depend on common histories providing social capital, so there is a question of whether engagement leads to social capital, which according to Nahapiet and Ghoshal (1998) allows an exchange of new intellectual capital and provides an organisational advantage. The connection between engagement and social capital is not yet clear and will be discussed in the concluding chapter.

7 Conclusions

7.1 Introduction

The aim of this thesis was to understand how public sector clients engage with their external consultants on IT projects. Four research questions were identified and answers have been detailed in the previous chapter. They are:

What behaviours are required for engagement?

Which conditions are important for producing engaged behaviours?

How do conditions and behaviours interact?

What kind of value results from engagement and how is it produced?

In this chapter, the contributions of this research to theory and practice are discussed, then its originality. Its limitations are identified and followed by suggestions for future research.

7.2 Contributions

This research contributes to theory in addressing the gap in the literature on engagement, and extending the theory of social capital. It also contributes to practice by providing a model that practitioners can use to address issues of engagement between participants on IT projects.

7.2.1 Contribution to theory

The research contributes to understanding the phenomenon of engagement between IT project participants in public sector organisations, and addresses a gap in the literature on engagement by exploring conditions and behaviours of engagement rather than the antecedents or outcomes. It contributes to theory in several ways. First, it suggests a model for analysis of engagement, which shows how engaged behaviours can emerge from existing conditions, behaviours that can then influence and control the conditions. Secondly, it demonstrates the role of conditions and behaviours, and thirdly it extends the theory of social capital. Finally, it adds to theories of client-consultant relationships.

Contextualised model of engagement

The first and major contribution is a model of engagement that has factors that explain engagement in terms of conditions and behaviours. Crucial behaviours have been demonstrated to be sharing, sense making and adapting, and other behaviours emerge under certain conditions that are necessary although not sufficient for engagement. The research shows how participants may behave together on successful projects. Participants engaged using sharing and sense making behaviours that allowed them to adapt the conditions in which they worked. This interpretation was based on a synthesis of all cases to deduce a potential model, shown again in Figure 7-1. Conditions of environment, expertise and participants in combination afford behaviours that emerge when knowledgeable project participants interact with their environments, and each other. Engagement appears to be a dynamic and continual process with self-reinforcing cycles that a manager or consultant can identify and alter for the benefit of the project.

The model looks at engagement, built on others' work, such as on knowledgeability (Orlikowski, 2002, Wenger, 2000) and materiality (Orlikowski, 2006). It supports recent work on how consultants use materials (Skovgaard-Smith, 2009), on sense making that uses materials (Werkman, 2010, Beers et al., 2006) and on how consultants act as mediators (Bloomfield and Danieli, 1995).

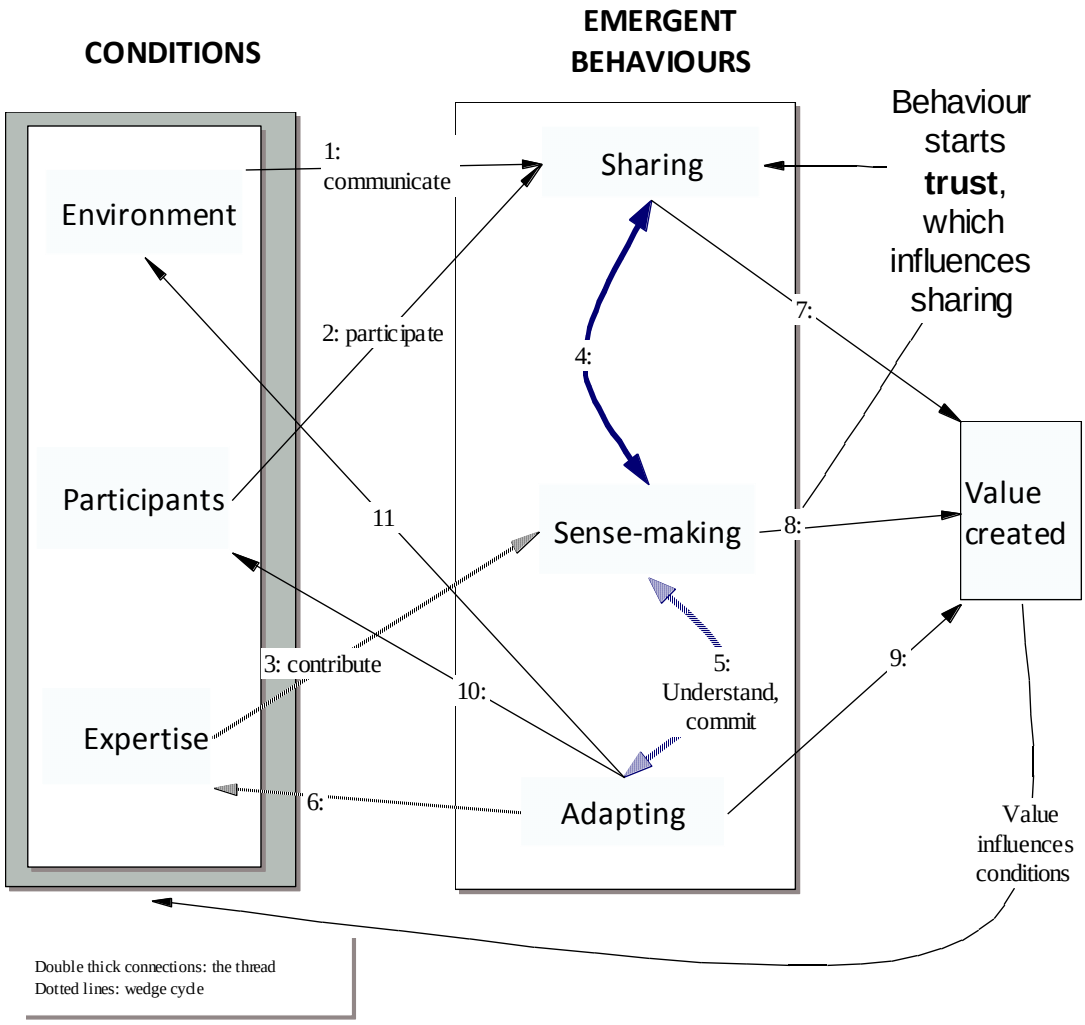


Figure 7-1: model V2

Role of conditions and behaviours

Secondly, this research has contributed to theory by identifying the role of conditions and behaviours and their cyclic self-reinforcing nature. The empirical work indicates the relevant factors of behaviours and conditions, conditions affording, but not causing, certain behaviours.

A system that allows sense making will include participants who transform each other's understanding between themselves. Participants want to make sense of each other's perspectives so negotiate round each other's meanings, identifying each other's terms, meanings and values, aiming at sharing knowledge through discussion. Sharing and sense making is an interaction that seems crucial to engagement. Without sharing participants

cannot make sense; without sense making participants stop sharing, and sharing builds trust too. In addition, adapting seems to depend on sense making, so that sharing, sense making and adapting create a thread that sews all the engaged behaviours together. These emerging behaviours appear to influence the conditions, altering them, and bringing value in the alteration. Behaviours and conditions were found in cycles of engagement, and the cycles were named as wedges and banners. Wedge cycles start from expertise contributed to sense making behaviour, which cycles to adapting and back to expertise. Banner cycles can start from conditions of environment or participants communicating or participating so starting the thread of sharing, sense making and adapting. One banner cycle can lead to another banner cycle if the adapting behaviour changes other than the starting condition.

Social capital

A third contribution to theory is that this research has extended the theory of social capital to projects that start without pre-existing relationships, with no initial structure or relational dimension to social capital. It therefore extends Nahapiet and Ghoshal's dimensions of social capital. It extends the relational dimension by showing how the facet of trust develops from credible performance so reducing arduous relations between project participants who become more willing to share. The research also extends the cognitive dimension's facets of shared codes and language. Shared language develops from sharing time, material and expertise, and making sense of each other's meanings clarifying language and codes to provide project participants with common concepts for evaluating project process and software development. Nahapiet and Ghoshal's structural dimension of social capital includes the facet of network ties. This research shows that consultants and suppliers seek to recognise that whom they know in the client organisation affects what they know and so they must work on the relationship with their client counterparts, thus creating network ties as part of the structural dimension of their social capital.

The thesis considers engagement as a two-way relationship that allows transfer and sharing of knowledge through working with other people. It complements the work on social capital

by theorising building of new relationships, engagement creating and strengthening social working relationships.

Theories of client-consultant relationships

The research contributes to studies of the client-consultant relationship that use the concept of otherness (Kipping and Armbrüster, 2002, Clegg et al., 2004) and uncertainty (Glückler and Armbrüster, 2003, Fincham, 1999) by showing that differences between client and consultant constitute an essential component of the relationship. A consultant can bring an independent perspective and a counter-culture that complements the client's culture. The research also helps to address an empirical gap on the extent to which clients encourage consultants to share and develop clients' knowledge (Sturdy et al., 2009: 178).

7.2.2 Implications for practitioners

Reflections and suggestions for practitioners are identified. First, consideration is given to analysing components of engagement in order to control and adjust it. Secondly, responsibility for engagement is discussed. Finally, the importance of leadership is noted.

Analysing components of engagement

The model applies to practice because the research has identified conditions and behaviours that practitioners can identify and control, and practitioners who read early drafts of this thesis could see such applications. When a project starts or stumbles, the model can be used as a means to analyse situations where engagement is required. Practitioners can apply the model to the situation aiming to compare it with the model and to interpret discrepancies by matching components and noting discrepancies that might need attention. Discrepancies might reveal conditions that can be adapted or the comparison might demonstrate engagement is already happening. Initial comparisons may indicate a need for further comparisons at a more detailed level on each component, behaviour and interaction. If a component of the model is missing, the evidence might also be that engagement is not effective. Lack of information on a connection or component implies one of two things: either a need to find more information, or a need to change.

Practitioners can change engagement by controlling the conditions. To initiate shared behaviour, managers can choose the environment, time, place and objects that are to be shared. More formal places and times will create an auditable form of sharing; less formality seems to increase sense making behaviours, and knowledge sharing. Engaged behaviours are partly enabled by materials, so changes to these afford further changes of behaviour. Consultants can control expertise that demonstrates credible performance, so that clients trust and the sharing-sense making interaction then iterates. They can also be willing to share time and space in order to get to know their client better. Conversely, managers may not want engagement and deliberate enact the environment to reduce or avoid it. Again, the model draws attention to components that help that enactment.

The six components of the model may be developed into a checklist for managers to take specific action on each component using the checklist to analyse a situation and see what particular aspects to look for. A public sector practitioner, reading a draft of this thesis suggested creating a practical handbook for managers with guidelines based round the six components to examine in order to bring a project back on track and aim for coproduction.

These case studies demonstrate how engaged behaviours manifest in the public sector IT context, although the model might also apply in IT contexts other than the public sector. That to some outsiders, the public sector culture appears to be slow and conservative in contrast to that brought by the external advisors is not an issue of concern, because the different culture of consultants and suppliers can be used to good effect, to get both their technical skills and their wider, neutral perspective. Czerniawska (2010) points out a reason for hiring consultants is for their independent perspective, but that is not quite the same as being neutral with the various different key parties of the client organization. An external consultant's independence can provide a basis for engagement and sense making in a way that internal participants cannot. Neutrality allows engagement, whereas strongly shared perspectives with one part of the client system would undermine effective engagement with other parts.

The research indicates that consultants vary their behaviours depending on which parties they are working with, using their skills to engage differently with various parties, whereas clients do not use or do not have the same skills. Therefore, public sector clients can take advantage of such a consultant to engage differently with departments that have diverse perspectives and agendas for their IT projects, in order to reach a common understanding and a business case for IT development that supports overall government policy, reduces costs and manages risk.

The research shows consultants and suppliers make an effort and take time to create interactions between people. The research also shows that sometimes clients also make efforts to interact, but sometimes fail to interact continually. It may be that client senior management leave it until things get dire. However, change and adapting is a consultant's raison d'être, and the consultant sees the job as to initiate change, hence it is seems that consultants take more initiatives than clients to make interaction and engagement happen.

A public sector manager reviewing an earlier draft of this thesis commented that it was necessary to consider the cultures of the organisation and of the consultancy before employing consultants, looking for cultural fit, checking if the organisation would be able to work with the consultant or the consultancy, as well as checking its track record and recommendations. This consideration should be coupled with getting the public sector organisation itself ready for change. People have to buy into the change to the point where they see the future gain as better than the current, and the project sponsor has to convince them. Such a job of painting a vision of the future usually falls to the chief executive, who has to convince the whole organisation and get its vision and culture right.

In summary, outsiders bring a counter-culture that balances the client's culture, consultants stressing or underplaying the differences depending on the type of task. If developing a software product, it seems better for participants to recognise their similarities in order to work together and achieve their mutual goal. If providing strategic advice, it seems better for consultants to emphasise their counter-culture. Whatever the goal, it must be shared.

Responsibility for engagement

Shared goals are helped by shared engagement but there remains a question of who is responsible for engagement. On the one hand, the consultant may be held responsible because of being brought in with the task of bringing about change in the organisation. On the other hand, change in the client organization eventually affects the client, whereas the consultant leaves. While both parties need to be active agents of engagement within their respective roles, it must ultimately be the client's responsibility to use engagement to get best value from the project. Given that these case studies were of successful projects, it is not surprising to find that overall both clients and consultants engaged with each other. Nevertheless, whilst the evidence is that consultants continually engaged, occasionally clients were insufficiently proactive for the duration of the project. If clients will not or cannot, for example, share and check their software development requirements, then they are likely to get a system that does not match their unspoken expectations. If client management does not check progress, then consultants could be developing the project in the wrong direction. If clients continually avoid engagement, then they miss reaching maximum value for the public organisation; they need to respond to consultants' overtures of engagement, even if they do not initiate engagement. Moreover, clients need to interact regularly in order to ensure the engagement cycles keep working. This requires a leadership role on the part of the clients.

Leadership role

The research suggests the importance of the role of leadership in collaborating organisations, finding what smoothed the project journey, identifying how participants oiled the wheels, not just that they did oil the wheels. Engagement oiled the wheels – and the mediators were the oilcan holders who initiated engaged behaviour and oiled the behaviour - they tended to be either senior management or external, independent, neutral consultants who adapted their behaviour when necessary to cater for their clients' values.

7.3 Originality

This research identifies behaviours of engagement. It demonstrates conditions that are necessary and afford engaged behaviours. Importantly, it analyses and demonstrates the self-reinforcing cyclic interactions between behaviours and conditions. In addition, this research has shown how valuable engagement is to the risk management and cost-effective completion of IT projects through the development of trust, the exchange of intellectual capital and increased knowledgeability.

This work is original because such a model of cyclic engagement between clients and consultants has apparently not been developed from literature and tested empirically, to identify emerging behaviours, in inter-organisational collaboration to get a common project done. This research provides rare access to the practices and perceptions of both consultants and their clients (Sturdy, 1997b) in the public sector.

It is original, because it looks at how clients, together with external IT consultants produce project work effectively. In particular, this is the only academic empirical research as far as the researcher is aware into engaged relationships between consultants and clients in public sector IT. Some researchers have looked at consultants in the public sector (Seddon, 2008, Fincham et al., 2008) and some have looked at engagement in learning situations (Handley et al., 2006b, Handley et al., 2006a, Handley et al., 2007) but few, if any, have looked at the combination of engagement and consultancy in the public sector that is presented in this research.

It adds information on how informal relationships can add value to what to formal contracts and audit trails bring. It also appears that engaged participants are willing and able to account to each other, so there may also be a contribution to accountability theory. Governance in public sector organisations impacts engaged behaviours because of the requirement to be accountable for behaviour.

7.4 Limitations

Chapter 3 describes the extent to which the research was designed to ensure validity, reliability and generalisability. This section draws the reader's attention to areas that may be taken into account when assessing the research. Some limitations of this research are method, context and sampling constraints.

7.4.1 Method

It is not possible to access the informants' experience of engagement directly; the researcher was only been able to access the respondent's *statements* about engaged behaviour between participants on projects. It is not possible to overcome this limitation entirely, as one individual cannot share another person's experience of the world. However, one possible way of reducing the impact of this limitation would be for the researcher to observe informants, and although, public sector access constraints mean that it is rarely possible, one formal meeting was observed. Being present at more meetings would allow observation of engaged behaviour and conditions surrounding behaviours, and would perhaps allow triangulation of accounts of the same events.

7.4.2 Context

The results of this research are based on data obtained for IT-based projects. This provides a consistent and stable context for capturing informants' perceptions of engagement. IT based systems development projects are likely to use a methodology (such as analysed as part of the environment in cases A and D), but if no methodology were used, on a consultancy project, it is not known if deliberate management of engagement would improve project value. Non-IT based business change public sector projects also use consultants who provide technical and management consulting, including construction projects, road-building projects, contractor-buying services, preparation, archiving and management of manuals, local government spending reviews, library service reviews, interior design, and human resource issues such as pensions, recruitment or training. Many such projects do not use or need methodologies and yet would benefit from engaged relationships, so research of

projects that do not use a defined methodology such as PRINCE2 might indicate something of the relationship between methodologies and engagement.

7.4.3 Sampling Constraints

This is a qualitative study with documentary evidence and interview data from over thirty informants, which though a small number, has provided a wealth of data. More informants and longer interviews might increase confidence in the results.

A special factor that affected the research was access to case study organisations in the public sector. The researcher obtained case studies through clients who were happy to let her interview their consultants as she found that although consultancy firms were interested in the research topic, they would not allow her into projects because of client confidentiality. Consequently, all the case studies are of projects where the clients are pleased and proud of the process and outcome. Few organisations will admit to failure, so it was not surprising that organisations amenable to opening themselves to the researcher believed they had a successful project, where key parties had worked well together. In that sense, this biased sample of case studies shows only success. Less blatantly successful projects might confirm or adjust the model.

The case studies were of two types of task: either consultancy projects or software development projects, so study of more cases of each type would clarify if and how engagement differs depending on the task.

Another constraint was that although the informants came from a range of public sector organisations, only one case study came from UK central government despite a lot of policy literature being aimed at central government departments. Therefore, another case study in a central government department would enrich the data.

The researcher was given a photo of project participants absorbed in a live IT project. However, because it shows identifiable people, there could be ethical constraints to

publishing it. The researcher would like to have and use photographs of project participants at work.

7.5 Future research

This study is explorative research into a little studied area of what goes on between clients and consultants on projects. Further research that refines and extends the model and adapts it for other contexts is suggested, particularly on less obviously successful projects. This research could be extended to replicate the study in a similar context, and that might confirm the adequacy of the model as a normative model and allow further investigation of the interactions between the behaviours and conditions. Other contexts could be extended to non-government IT projects.

The theoretical model that the research generated would benefit from further testing and refinement to elaborate on the influence of the emerging behaviours on each other, and how changing the conditions affects behaviours. Other researchers with different perspectives who research additional cases could increase the credibility, and robustness of the conceptual framework. Further research should clarify how far it is possible to make the model more dependable and useful to practitioners, and whether it provides a suitable way of understanding relationships in project contexts.

Several points remain unsolved. For instance, the cost of maintaining engagement may be time, but that is unclear. Equally unclear is how to measure the quality of engagement. Differing project methodologies and methods of systems development may influence engagement. A practising project manager, reviewing a draft of this thesis, pointed out that large projects need gateway review points that allow them to keep control. However, if the review points constrain the execution of the project to follow a waterfall model, disaster is risked when in later stages it becomes apparent that there were flaws in deliverables from earlier stages or that key requirements have changed. In such situations, a concurrent engineering approach is more effective. Reconciling a formal review framework with a

concurrent engineering model appears to be a difficult challenge in the public sector and is an area that merits more research.

Supplier relationship management and client-consultant engagement may have overlaps that are worth investigating. It would be interesting to identify other situations where a change of participants changed the environment. In case A, it might be inferred that the environment had changed some years earlier, when a new ISD CEO arrived and brought in the consultancy to plan strategy. A longitudinal research study would help.

This research does not have much data on materials that consultants used, depending on interviews more than observation, although the researcher did see notes being made, and presentation material that was shared between participants. An ethnographic study of an IT project would allow observation of how people used materials, together and how such use afforded sharing, sense making and adapting.

7.6 Final thoughts

This final section addresses closing thoughts on this research. Research aims were achieved in that the researcher has explored how public sector clients engage with consultants on IT projects, and how engagement produces value on public sector IT projects. The exploration led to the development and validation of an inductively generated and empirically tested model that shows how participants engage on IT projects. By presenting empirical research with case studies, this thesis has uncovered detailed perceptions of how IT project participants build engaged relationships to achieve project work. This thesis has set out the findings that addressed the research questions by developing a framework for engagement that demonstrates self-reinforcing cycles. Engagement was seen to require essential emerging behaviours of sharing, sense making and adapting that self-reinforce and interact with conditions of environment, participants and expertise in a self-replicating system.

The results of this research address a gap in the literature on understanding engagement, and address problems of reifying social capital by focusing on the process of building

relationships to identify how engaged behaviours can produce value through exchanging and building new intellectual capital. Suggestions have been made in this chapter as to how client management can manage the engagement process with external consultants. In conclusion, this thesis provides useful insights that help enhance understanding and management of engagement.

8 Appendices

8.1 Appendix 1: search terms

Initial searches were on a wide variety of terms relating to consulting, consultancy, relationships and public sector accountability from EBSCO, Web of Science, and Emerald databases. A limited sample of these earlier searches is given in Table 8-1, and a list of the more comprehensive searches for engagement given in Table 8-2.

Table 8-1: sample of initial literature searches

Search term	Database searched	Date	Hits	Comments
Accountability & "public sector" & GB & system	EBSCO	7/11/07	102	Refined to use academic journals giving 79 results
OD or "organisational development" or organizational development " and intervention	EBSCO	1 /11/07	227	Searched latest 140/277 back to 1989
Followed up from Curtin's citing: citizens perception accountability	Google scholar	30/11/07		Found Bovens & others in EU Law Journal July 2007
Management & consultants & management	EBSCO	19/12/07	651	Sorted by relevance revealed several older papers
			Then narrowed and chosen by authors: Clark, Schein, Handley, Wright, Sturdy	
management of consultants	EBSCO	19/12/07	104	Of which 46 were academic journals
Czarniawska	EBSCO	19/12/07	32	RH suggested
Public & consultant	Science Direct	21/01/08	5	Not useful
Public accountability	Science Direct	21/01/08	103	Not useful
Evaluation & consultants	Science direct	13/02/08	16	RH suggested
Evaluation & consultants	EBSCO	15/02/08	1395 of which 8 books, 1 useful. 616 academic journals. When sorted by relevance, top hits were 2005, 1990, 2003, 1979, 1978, 2004, 2005 – implying a gap. Identified 40/200 of most relevant	

Search term	Database searched	Date	Hits	Comments
IT & Evaluation & consultants	EBSCO	15/02/08	484	Of which 271 academic. Not much more found than above, not much this century.
IT & public sector & consultants			145	79 academic journals
Client & involvement & information	EBSCO	11/03/08	62	Academic journals
Involvement & information systems	EBSCO	13/03/08	499	3 books, 331 academic journals
information systems & project management & user	EBSCO	13/03/08	51	Academic journals
Information systems OR Information technology & consultan* & management	Web of science	28/03/2008	118	Within business & economics OR government & law get 50 results – not much looks useful – 3 saved to web
Value & management & public & consultan*	EBSCO	31/03/08	470	217 in academic journals – top of which includes Dalziel's article again, so repeats earlier searches
(public management) AND (consultan*) AND (value) AND (information systems)	JStor	31/03/08	10903 Too many, and need to change search parameters.	
Value & consultants & public	EBSCO	03/04/08	569	269 academic
Value & consultancy	EBSCO	11/04/08	210	academic

The following table lists all the searches related to engagement

Table 8-2: literature searches for engagement

Search term	Database searched	Date	Hits	Comments
engagement OR involvement OR commitment AND requirements AND project	EBSCO	28/05/08	2083	937 academic
engagement OR involvement OR commitment AND requirements AND project	EBSCO	28/05/08	104	Academic of which 3 are in journal 'Management services'
"Engagement with" & concept	EBSCO	06/06/2008	61	academic
(consultant and involvement or "engagement with" or commitment and "public sector") and JN "Public Administration"	EBSCO	06/06/2008	12	1 new one by Gould-Williams
Engagement & factors	EBSCO	06/06/2008	433	Academic
(engagement and factors) and JN "Educational & Psychological Measurement"	EBSCO	06/06/2008	3	1 possibility in Educational & Psychological Measurement; Aug2006, Vol. 66 Issue 4, p701-716, 16p, 4 charts
"**Engagement** in **Full Text/Abstracts** and **consultant** in **All Fields** and **factor** in **All Fields**, in **all subjects**, in product type **Journals**"	Wiley Interscience	09/06/2008	1/3	Picked up something by Gable
"**Engagement** in **Full Text/Abstracts** and **factor analysis** in **All Fields**, in **all subjects**, in product type **Journals**"	Wiley Interscience	09/06/2008	112	
consultants public engagement	JStor	09/06/2008	1267	
((((consultants) AND (public)) AND (engagement)) AND (factor analysis))	JStor	09/06/2008	495	Rosenblum & McGillis 1979
((((consultants) AND (public sector)) AND (engagement)) AND (factor analysis))	JStor	09/06/2008	211	Huxham 1993
((((consultants) AND (public sector)) AND (concept of engagement)) AND (factor analysis))	JStor	09/06/2008	164	
Engaged collaboration	EBSCO	23/07/08	0	
Engaged AND collaboration	EBSCO	23/07/08	137	77 academic journals, but top hits were in construction, or education,

Search term	Database searched	Date	Hits	Comments
				and not available.
engagement theory	EBSCO	23/07/08	6	But is relevant: a) to education, b) to engagement with an *activity*, not with people
employee engagement	EBSCO	23/07/08, & 27/10/2010	305	Scholarly results
work engagement	EBSCO	23/07/08, & 27/10/2010	120	Scholarly results
Engagement AND collaboration	EBSCO	23/07/08	125	86 academic journals, 1 book but that was on economics. The journals look promising
Knowledge AND engagement	EBSCO	23/07/08	451	345 academic journals, 5 books
Engagement AND project	EBSCO	24/07/08	296	Academic journals, including Mathur, Narain & Austin, sorted by relevance
Engagement AND project AND knowledge	Academic Search Complete	24/07/08	143	academic journals Sorted initially by date, but then by relevance
Engagement AND process	EBSCO	27/10/2010	1245	Too many - rethink
"IT projects" and consultan*	EBSCO	31/07/08	110	21 academic papers
Engagement AND value AND consultant	EBSCO	06/08/08	39	22 academic journals including Pollitt 2006 & Appelbaum et al 2005
engagement and psychology	EBSCO	06/08/08	476 academic	
Handley AND engagement	EBSCO	04/09/2009	0	No results
Engagement AND learning	EBSCO	04/09/2009	629 – 427 academic	
Engagement AND learning AND project	EBSCO	04/09/2009	81 – 66 academic	
Engagement AND social capital	EBSCO	28/09/09	105	93 academic
Engagement AND conflict	EBSCO	28/09/09	221	I want to know how engagement mitigates conflict

Search term	Database searched	Date	Hits	Comments
Engagement AND dimensions	EBSCO	01/10/09	192 academic	
Engagement AND knowledgeability	EBSCO	20/10/09	4688 academic	Too many, so selected some of the most relevant, e.g. Orlikowski

8.2 Appendix 2: questions for reviewing the literature on engagement

Table 8-3: review questions for engagement

	What is engagement and what form does it take?	What produces, allows or encourages engagement?	Which forms of engagement are significant in terms of producing effectiveness?	Evidence
(Buckingham, 2005)	Work engagement is a leadership issue	Motivation is significant (p3)		Practitioner literature based on a Gallup poll survey in the 1990s.
(Block, 2000)	"a paradigm for change",	Balance between presentation & participation, disclosure & expression of doubt, choice, conversations, structure of meeting, physical structure of the room (p266)		
(McMaster, 1996)	"An interaction that occurs between individuals and it forms the communicative fabric that becomes the background for the other conversations within a corporation", p170	willingness, do to with context and listening more than with speaking Conscious act of choice A social context	Dialogue,	This book explores ideas, based on his practical consulting experience in large corporations.
(Saks, 2006)	a construct and "a long term on-going process" (614)	characterised by energy, involvement efficacy but different from job involvement & cannot be sure what produces it	cannot be sure	survey of 102 employees measured antecedents and consequences of job and organization engagement
(Schaufeli et al., 2006)	Work engagement is a state of mind, "A persistent and pervasive affective-cognitive state" (p702)	vigour, absorption, dedication characterise work engagement	"It can only be concluded that work engagement is related to professional efficacy, but no conclusion can be drawn about any causal order." (713)	developed UWES questionnaire from database of 27 studies in 10 countries

	What is engagement and what form does it take?	What produces, allows or encourages engagement?	Which forms of engagement are significant in terms of producing effectiveness?	Evidence
			forms not identified clearly	
(Wenger, 1998)	mutual commitment, a dimension of a community of practice, social energy A process of community building,	trust, coming to the office, negotiation, relations of mutuality	Forms are not discussed but engagement is "a vehicle for sharing ownership and meaning"	Case studies: claims processor's day & use of a claims worksheet for calculations

8.3 Appendix 3: examples of thematic analysis

Example of thematic analysis from selected references on *engagement*

Table 8-4: thematic analysis of engagement

Author	Definition of engagement	Characteristics	Influence on management	Findings	Comment
(Adler and Kwon, 2002)	They discuss solidarity as a benefit of social capital. Solidarity can bridge unconnected groups. "the positive externalities associated with a collective actor's internal solidarity include civic engagement at the societal level"(p30)		"Norms and beliefs in the surrounding environment influence the value of a given stock of social capital." (p33)	They provide a theoretical approach to social capital.	This paper is important for its discussion of bridging and bonding social capital.

Author	Definition of engagement	Characteristics	Influence on management	Findings	Comment
(Appelbaum and Steed, 2005)	They explored the client-consultant relationship on projects other than IT, where category of client type was limited to 'intermediate'. (Schein, 1997)	Listed Turner's 8 categories of client-consultant relationships (1) providing information to a client; (2) solving a client's problem; (3) making a diagnosis, which may necessitate redefinition of the problem; (4) making recommendations based on the diagnosis; (5) assisting with implementation of recommended actions; (6) building a consensus and commitment around a corrective action; (7) facilitating client learning; (8) permanently improving organizational effectiveness. (Turner, 1982)	They give organisation guidelines for consultancy projects, including "emphasis on clarity, internal communication and buy in" consultants must invest time learning about the organisation, implementation plan and execution must be part of the consultancy mandate develop governance procedures (p91)	They stress management consultant accountability Found success factors present in the projects included the consultant who partnered the project team throughout; was professional; and understood client's sense of urgency. (p87)	They measure critical success factors for client –consultancy relationships,

Author	Definition of engagement	Characteristics	Influence on management	Findings	Comment
(Axelrod, 2001a)	A paradigm for change (p32)	Four principles: Widening the circle of involvement Connecting people to each other Creating communities for action Embracing democratic principles (p33-34)	Free flowing information & cooperation People aligned around a common purpose Improved productivity (p35)		About change, & consultants
(Axelrod et al., 2004)	Defines involvement to be "working with others to get things done" (page xi)		Reasons for engagement Need others' specific expertise Need others' help with basic to do Need others' "care & commitment involvement" Need others to become more capable (p12)	Draws on experience of consultancy projects	
(Barki and Hartwick, 1989)	"user participation […] the behaviors, assignments, and activities that users or their representatives perform during information system development"		Barki & Hartwick found that given a high quality successful system, involved individuals were likely to develop positive attitudes.	Much cited , they distinguish between the concepts of user participation and involvement	

Author	Definition of engagement	Characteristics	Influence on management	Findings	Comment
(Barki and Hartwick, 1994b)	Defined participation as above	Responsibility, hands-on activities, and User-IS Relationship. (from (Barki and Hartwick, 1994a))		user participation & disagreement lead to conflict, however conflicts are less likely when users have influence	
(Billing, 2009)	He analyses inside the client-consultant relationship. He proposes a view of effective consultancy as having a "paradoxically detached involvement in client affairs." (page 29) Is detached involvement engagement?		The experiences and knowledge (p43) of both client and consultant, when brought together contain "the possibility of novelty from the perspective of both [...] this brings a level of accountability to the consultant for his or her willingness to be changed by the interaction."		Where is the accountability for the client? Billing is not researching the public sector, but in the public sector, the client must be accountable for using external professionals, and that accountability must be in the interactions, mustn't it?
(Block, 2000)	"The art of bringing people together" (p248)	Build trust & commitment Support the emotional side (p264) Meetings: disclose, allow choice, balance presentation & participation(265), converse without cynicism, physical space based on circle	Measurement, engineering & economic strategies reinforce bureaucracy		About client- consultant relationships Accountability is a personal choice (p279)

Author	Definition of engagement	Characteristics	Influence on management	Findings	Comment
(Block, 2001)	Engagement is used in the sense of collaborative discovery (p129) Bureaucracy increases through hierarchical participation (p294) Engagement relies on voluntary participation (p301)	Caring about the material context is important for allowing dialogue (chapter 31)	He gives five elements of engagement: 1. Balance between presentation and participation 2. Full disclosure & public expression of doubt 3. Real choice on the table 4. New conversations 5. A physical structure of the room that supports community	there's a "*paradigm shift moment*" (p315) when everyone directs to a common goal	the consultant can raise the client's consciousness of the value of engagement in the implementation process (p265)
(Brown and Eisenhardt, 1997)	about how organisations engagement in change		"ongoing formal cross-project communication"	successful change requires blending a limited structure round responsibilities and priorities with extensive communication	they researched continuous change in the computer industry,
(Buckingham, 2005)	A journey of sensing, learning, integration	Rules and strategies are suggested	It's a leadership issue that tends to be 'put on the back burner'		

Author	Definition of engagement	Characteristics	Influence on management	Findings	Comment
(C&AG, 2006b)	Engagement is a recurring theme in successful programmes and projects (but is not defined). Lists causes of project failure , e.g.: lack of effective engagement with stakeholders, lack of understanding and contact with supplier lack of project team integration (p51)	P14 to ensure senior level engagement: Making informed judgements Having a decision making structure that ensures leadership *Incentives* exist to drive performance (my italics)		Case studies lessons: Senior level engagement is crucial for successful delivery of IT enabled change (29) because: it demonstrates that senior management is committed to the change it provides mechanisms to prioritise it creates a decision making structure	Engagement goes with acting as an intelligent client. However, incentives are *not* part of engagement according to other literature.

Author	Definition of engagement	Characteristics	Influence on management	Findings	Comment
(Czerniawska, 2006b)	. This paper is about value from consultancy engagement.	She argues that "the extent of engagement amongst managers from clients organisations who work side by side with consultants determines the success of the consultancy project" (p7)	Findings based on a survey of 120 managers from a range of sectors who had dealt with consultancy projects. Success factors are credibility, sense of purpose, communication, commitment, buy-in, setting up terms, flexibility and client s gaining personally.		Implies the term has two meanings: contractual & relationship
(Fincham, 2002a)	Engagement in political behaviour but a powerful sponsor enables consultants to avoid politics		Consultants avoided engagement (p77) being a sense maker & facilitator rather than central actor	Power games are employed in client firms Difficulties of knowledge transfer	Show need for sponsor but also how engagement might be bad or the wrong sort of engagement
(Handley et al., 2007)	Requires differentiation between participation and 'engagement in practice' (181)		Context of learning situations		Refers to Wenger
(Hartwick and Barki, 1994)	Participation and involvement are separate constructs			Key dimension of user participation is responsibility	Research aimed to demonstrate the benefits of user participation and involvement

Author	Definition of engagement	Characteristics	Influence on management	Findings	Comment
(Huxham, 1993)	Collaboration is a cyclical process that brings strategic advantage by creating synergy between collaborating organisations		A basis for client-consultant discussion in some consultancy situations	Identifies collaborative advantage and shared meta-strategy	
(Ives and Olson, 1984)	"User involvement" refers to participation in the system development process by representatives of the target user group."				
(Kappelman and McLean, 1994)	"The term user engagement is proposed as a general term for the total set of user relationships toward information systems and their development, implementation, and use."	Participation is "the term applied to behavioral engagement of users in the process of information system development"; Use is "the term employed to denote the behavioral engagement of users with the resultant information system."			This is a taxonomy of terms, not research

Author	Definition of engagement	Characteristics	Influence on management	Findings	Comment
(Macey and Schneider, 2008)	They call engagement a 'construct', and a relatively new one on whose creation and leverage HR consulting firms advise. However, they state that the meaning of the concept of *employee* engagement is unclear.	The relationships between components, antecedents and consequences have not been conceptualised or studied. Engagement could refer to a psychological state or a performance construct.	Positive consequences of engagement have been assumed.	Most of the engagement measures have failed to get the conceptualisation correct.	This is about *employee* engagement within an organisation rather than engagement between parties from two or more organisations.
(Marcum, 1999)	Elements of engagement theory are learning and involvement (p45). It requires direct participation & is characterised by persistence It's a dynamic process, a continuous activity not a goal	Drivers are learning, use of better knowledge and involvement. Self-determination, interest, enjoyment, participation, and challenge	Think of partnerships Scan for interests & competencies Focus on achievements Provide & support continuous learning Test with challenges Negotiate projects (p46)		Persistence must be qualified in the context of a project, which by its nature is temporary.

Author	Definition of engagement	Characteristics	Influence on management	Findings	Comment
(McMaster, 1996)	"the process of communication through which we are able to express ourselves in ways that allow for the full participation of others in creating possibility and a possible future, a new theory, a new opening for action" p168 "communication which engages the intentions of another in ways that do not depend on force, coercion or covert operations of any kind and instead recognizes the self-organizing and self-creating nature of individuals" p170 "an individual occurrence within a social context"	"Dialogue is… central to engagement " (p170) Involves an opportunity for choice Natural to occur when … p171	Allows information sharing (p176) Power comes from generating information.		He also calls engagement an interaction. See Table 8-3: review questions for engagement on page 290.

Author	Definition of engagement	Characteristics	Influence on management	Findings	Comment
(NAO, 2006b)	A critical element of consulting projects "Engagement here implies gaining their enthusiasm and energy to see the project through to its conclusion," (p2)	Equates with commitment to a project Whole system model	Recommends actions for clients and consultants to improve engagement, e.g. Be clear Maximise value consultants can add Involve client staff Involve consulting firms before procurement Exchange information with suppliers Incentivise the consulting firm		Incentivising is motivation and there is literature that indicates incentives decrease motivation, and that motivation is not the same as engagement. So incentivising might be a misunderstanding of engagement.
(NAO, 2006f)	"'Collaborative Relationships' – Investing in the relationships and behaviours of organisations and people in the long and short term to deliver superior project performance."	"Those involved in the project ... develop a culture that supports a collaborative approach" (p8)	p3 the client is in control in good practice sub criteria by having "open trusting and honest relationships between client, prime contractor and supply chain" p5 "strong collaborative relationships go hand in hand with good project performance"	Flexibility of thought and application required relationship must be underpinned by a shared understanding of the risks of not changing and the benefits of working together	A barrier to successful working collaboratively on a project was "established and traditional adversarial practices and culture" (p11)

Author	Definition of engagement	Characteristics	Influence on management	Findings	Comment
(Robertson-Smith G and C, 2009, Robinson et al., 2007, Robinson et al., 2004)	This is about engaged *employees* with engaging *employers* despite the 2004 report saying engagement is a 2-way relationship between employee and employer but "engagement is not a recognised academic construct" These writers from the Institute of Employment Studies (IES) define engagement as "a positive attitude held by the employee towards the organisation and its values." The 2007 report recognises a relationship between engagement and organisational citizenship behaviour, suggesting engagement may be a combination of organisational commitment and OCB.	Engaged employee's behaviours are: belief in the organisation desire to work to make things better understanding of business context and the 'bigger picture' respectful of, and helpful to, colleagues willingness to 'go the extra mile' Keeping up to date with developments in the field. (see web site) The 2007 report addresses questions of what is engagement. What are its drivers and its outcomes?	In 2009, the IES made a full review of the literature on engagement from company definitions, academic, consultancy and research institutes' definitions. The influence on management is through using surveys that measure employee engagement, and the measurement is based on drivers and outcomes of engagement.	Findings were that drivers included job satisfaction, feeling valued and involved, and equality of opportunity, health and safety and length of service.	Engagement could perhaps also be a two-way relationship between consultant and client, rather than employee & employer. Two problems with the IES reports: *How* people engage is not addressed, but implications for organisations of the drivers are described. The reports are about *intra* organisational engagement, not how two or more organisations work together.

Author	Definition of engagement	Characteristics	Influence on management	Findings	Comment
(Robey and Farrow, 1982)	They look for correlation between involvement and system success.	Participation influences conflict & its resolution	there's a small negative relation between participation and resolution	Participation alone *reduces* the level of conflict resolution.	
(Saks, 2006)	Saks reviews literature p601 "An individual level construct" (p606) "related to individuals' attitudes, intentions & behaviors"	Explained through social exchange theory which holds that "a relationship evolves over time into trust, loyal and mutual commitments" (p603) Enriched & challenging jobs	Positive consequences for organisations (p606) A connection between employee engagement & business results	Employee engagement is both job & organisation engagement	Saks assumes he can measure the antecedents, but the definition is not clear enough. He writes (p615) "we cannot be sure that the antecedents cause engagement or that engagement causes the consequences."
(Schaufeli et al., 2006)	A persistent, pervasive affective-cognitive state A positive, fulfilling work-related state of mind	Vigour, dedication, absorption are important for *employee* engagement	Allows development & management of performance improvement	UWE survey can be used in studies of positive organisational behaviour	This research confirms previous research.

Author	Definition of engagement	Characteristics	Influence on management	Findings	Comment
(Smythe, 2007)	Not coercion, not manipulation A management or leadership philosophy two views: alignment and real Involvement in decision making to get more value from people p34 Situational	In general drivers are sources of influence, implying that if they can be pinned down, then the sources can be managed – this may be unethical p77 benchmarking results in isomorphism/convergence p80 drivers may be unique to an organisation categories of drivers: instrumental, cultural, workplace	Involves considering who will add value if involved in the decision-making process, inviting people to participate and influence routine decisions, bigger change and strategy (p 35) (Smythe, 2007: 90) found that bosses who trusted employees increased their engagement with the job.	Not based on academic research, but a practising consultant with McKinsey who researches employee engagement.	Value relates to research question on how engagement with consultants will add value. Smythe's philosophy suggests engagement cannot be measured.

Author	Definition of engagement	Characteristics	Influence on management	Findings	Comment
(Stumpf and Longman, 2000)	They develop models of consultant-client relationships, but seem focussed on the consultant perspective of the relationship, not the client.	They discuss identity of professional services firms, consultants, service providers or contractors. They discuss stages of development in the relationship, & at the 4th stage, "The consultant becomes a distinctive service provider for certain kinds of work that link to their proven competencies." Relationships then become 'we' and 'them', so when consultants use other PSFs, "they have difficulty describing these service providers as 'consultants' - so they use other language, for example, 'contractors'."		This is a discussion, not a research paper. They suggest the relationship should be collegial/peer.	NAO (2006d) on use of consultants refers to this paper, which is published in a consultancy practitioner journal
(Sturdy et al., 2008)	Focused on knowledge flow, not engagement	Disablers to knowledge flow included clients' low investment in relationships, & parties' lack of engagement		Authors suggest research of "conditions and dynamics of knowledge flow" and "importance of interactively produced and negotiated outcomes"	Value of engagement might be to improve knowledge flow. What is the relationship between investing in relationships and engagement?

Author	Definition of engagement	Characteristics	Influence on management	Findings	Comment
(Wagner et al., 2010)	They discuss value creation in collaborative relationships, not engagement. "Greater relational satisfaction favors less aggressive value appropriation efforts"	They use a metaphor of a value pie; there's only so much pie, so if someone gets a bigger share of value, someone else gets less.		In the field in which they research – industrial purchasing, they do not find mention of trust or commitment.	It is odd that this research does not find trust /commitment. This is purchase of a product, rather than a service. Is there a difference?
(Webber and Klimoski, 2004)	Uses engagement in sense of contractual		Trust is needed for a successful inter-organisational relationship	OCB impacts relationship	Quantitative approach

Author	Definition of engagement	Characteristics	Influence on management	Findings	Comment
(Wenger, 1998)	Mutual engagement is a dimension of a community of practice, involving engaged diversity, doing things together, relationships, social complexity, community & maintenance. Engagement is processes of community building, inventiveness social energy and emergent knowledgeability (p 237) "Can be a vehicle for sharing ownership of meaning" p203	Coming to the office enables engagement (p74) Being included Engagement is "a mode of belonging that is active involvement in mutual processes of negotiation of meaning" (p173). This is a threefold process, which includes conjunction of the ongoing negotiation of meaning, formation of trajectories & unfolding of histories of practice (p174). These lead to a mode of belonging and a source of identity Sustained intensity & relations of mutuality p184	Less visible than more instrumental aspects of practice (p74), so is easily undervalued, or unrecognized. Will give rise to communities of practice over time. Engagement is a resource enabling process of negotiating viable identities (p175). The work of engagement is the work of forming communities of practice (p184). Engagement requires access to and interaction with other participants, ability & legitimacy to contribute. "Communities of practice are organizational assets that represent investments in mutual engagement" p251	Engagement affords adaption and contribution to "shaping the relationships of accountability by which we define our actions as competent." Engagement means competence can become "so socially efficacious that it becomes insular" p175	Wenger's ideas epitomise to me what engagement is about. The list of engagement work processes on p184 might help me to create interview questions. The (NAO, 2006b) recommendations could be matched to Wenger's advice, but not clear if they are matched. Perhaps research could advise on that. To support engagement the infrastructure should include facilities of mutuality, competence and continuity (p237) so look for these facilities (e.g. physical space & interactive technologies) in the public sector context that uses consultants on an IT project

8.4 Appendix 4: procurement frameworks

Procurement frameworks are agreements to provide goods, works or services on pre-agreed specified terms and conditions including price. "Framework Agreement" is a general term for agreements with pre-approved suppliers that set out the general terms and conditions under which specific purchases (call-offs) can be made throughout a fixed period of time (NAO, 2010b). They can be used as the basis for a secondary competition for a specific requirement to conclude a formal contract. Figure 8-1 shows a framework contract, through which the client calls off work as and when required according to the framework agreement. The suppliers may be single or several (OGC, 2006) and consultants are considered as suppliers. This is the most common procurement model in UK government because framework agreements generally reduce procurement costs and provide better prices. (C&AG, 2006a: 7)

An understanding of procurement frameworks is relevant to this research because the first stage of a project is procurement of services, and there is some evidence that trust at the procurement stage can help start engaged relationships (Clark, 2010), with procurement history setting up expectations (Arino et al., 2001). Secondly, these framework agreements are becoming more common in the public sector and at least one case study uses framework agreements for procurement.

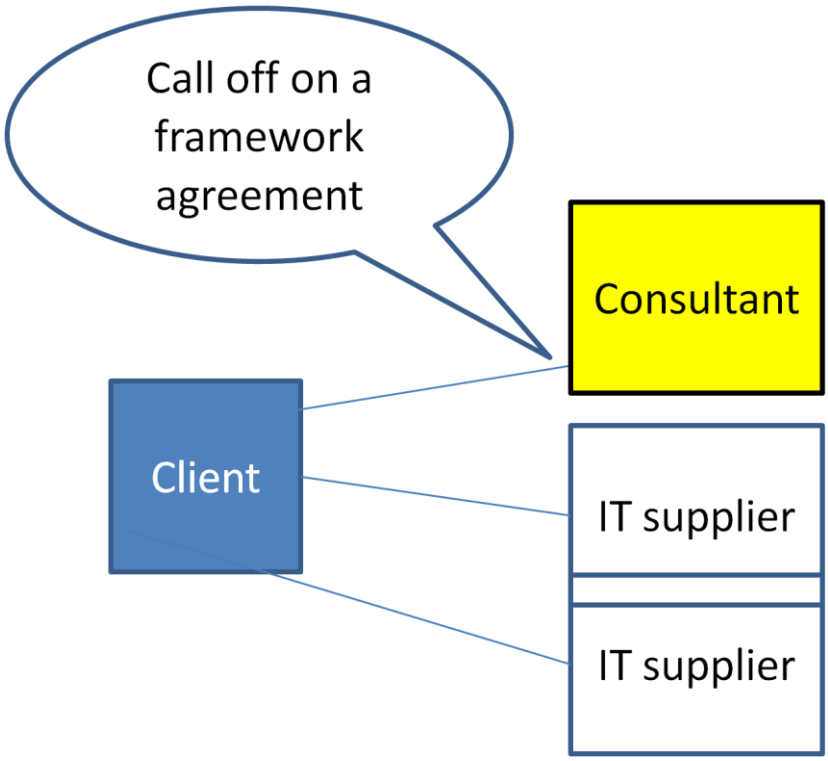


Figure 8-1: framework agreement

8.5 Appendix 5: interview timings

Table 8-5: interview times

	Who/role	Time	Case Study	Date	Comment
1.	ISD CEO		A	November 2008	Not recorded
2.	e-services manager	1:04:23	A	November 2008	
3.	Programme manager (contractor)	0:58:33	A	November 2008	
4.	Consultancy CEO	1:07:30	A	November 2008	
5.	Technical expert (contractor)	1:17:28	A	November 2008	
6.	Project manager, (user & tester)	0:36:30	A	November 2008	
7.	ISD BSM		A	November 2008	Not recorded
8.	Software developer (contractor)	0:37:03	A	November 2008	
9.	Consultancy project manager	0:43:21	B	November 2008	
10.	Licensing office(user & tester)	0:21:18	B	November 2008	
11.	Customer services manager (user)	0:26:48	B	November 2008	
12.	Director of Highways interviewed together with business systems manager	0:36:12	B	November 2008	0:12:56 + 0:23:26 One interview, two people, change of batteries
13.	Director IT	0:40:42	C	June 2009	
14.	IT user	0:29:55	C	June 2009	
15.	IT support	0:28:05	C	June 2009	
16.	IT manager	0:42:18	C	June 2009	
17.	SAP PM	0:28:25	Ad hoc	June 2009	Local government
18.	SAP manager	0:52:15	Ad hoc	June 2009	Local government
19.	Procurement manager	1:04:10	Ad hoc	July 2009	Central government
20.	Supplier relationship manager	0:47:10	Ad hoc	July 2009	Central government
21.	Supplier Account Director	0:41:59	D	October 2009	
22.	IT delivery director	0:22:09	D	October 2009	
23.	Supplier engagement lead	0:31:46	D	December 2009	Telephone
24.	IT user director	1:01:23	D	January 2010	
25.	Projects lead	0:28:51	D	October 2009	
26.	SCRM	0:15:18	D	November 2009	Telephone

	Who/role	Time	Case Study	Date	Comment
					NEAF
27.	Procurement manager	0:29:32	E	December 2010	
28.	Head EIS	0:47:35	E	December 2010	
29.	IT architect	1:15:25	E	November 2010	
30.	Manager Architecture	0:50:12	E	December 2010	
31.	IT PM	1:06:05	E	December 2010	
32.	User PM	0:30:00	E	December 2010	Not recorded
33.	Consultant master teacher	0:19:30	Ad hoc	August 2009	Telephone NEAF
34.	Ex consultant	0:50:16	Ad hoc	August 2009	
35.	Consultant	1:22:03	Ad hoc	July 2009	Recording too poor to transcribe
36.	Directors of IT firm	1:30:00	Ad hoc	December 2007	Not recorded NEAF
37.	Directors of IT firm	0:40:00	Ad hoc	2008	Telephone
38.	CEO of IT firm	0:50:00	Ad hoc	2008	Not recorded NEAF
39.	Consultant Head of Professional Development	0:10:26	Ad hoc	2008	Telephone NEAF

NEAF = No ethics approval form

Total time	27:24:36
Count of i/v	39
Average i/v	00:44:27

The recorder was set to voice activated, so the times indicate only when someone was speaking rather than the elapsed times that would have included the silences.

8.6 Appendix 6: interview guide

I'd like to ask you about X project. In particular, I'd like to have your views on how clients and consultants engage with each other and how they both contribute value to the project. I'd like to record our conversation for research purposes. What we say will be confidential. I have some sheets here with information about the project.

Provide the agenda of headings. Swap business cards, explain the digital recorder and then while recording, check they've had the information sheet, get the signed consent form & leave them a copy.

Do you want to ask me anything before we start? What have you heard about this study?

Background

- Could you briefly tell me about your background?
- Briefly, what is your role in the project?
- What do/ did you have to do? When?
- Ask if there are documents on the project that I could have.

Relationships & communication

- Participants: Who was involved? Who are the key parties? (*Draw a sketch as we talk*)
- Who do you interact with & how? Who do you spend most time with? Who is most important?
- What was your relationship with them like?
- How engaged to you think they were?
- What helps or hinders interaction in relationships?
- Where have you met people?
- Can you tell me about an **incident** that illustrates interaction or lack of it? Can you tell me about a time **when** relationships were really working well?

Knowledgeability

- What do you talk about with them? How important are these conversations?
- Who do you go to for information?
- What do you learn from each other?
- How are you using that knowledge?

Value

- What value do you think people brought to the project?
- What **challenges** did you face? Can you tell me (a story of) how were they overcome?
- What did / do the consultants contribute? What do the contractors contribute?
- What do consultants do that you can't? Why?
- Can you think of something that you discussed outside the workplace?
- How does engagement bring value?

Have we discussed everything you think we should? Who else do you think I should speak to? Thank you for your time.

8.7 Appendix 7: research and interview questions

Table 8-6: crossovers between interview & research questions

Research aim: to investigate how public sector organisations engage with consultants in order to deliver value to an IT project		
Interview questions	**Research questions**	**Comment**
Background		Finding about a participant's background may elicit information about relationships in and out of the office. It also provides information on previous expertise. Researching known interviewees beforehand revealed background, though information was more easily found on contractors and consultants than on public servants.
Could you briefly tell me about your background?		
Briefly, what is your role in the project?	Which conditions are important for producing engaged behaviours? How does engagement produce value?	This answer may indicate expertise. It also leads to a discussion of other parties involved, and hence an understanding of participants.
What do/did you have to do?	Which conditions are important for producing engaged behaviours? How does engagement produce value?	The intention was to annotate a timeline but that activity did not fit into the conversation. However, if background documentation were available beforehand, such as project initiation document (PID), that provided some idea of project stages.
Relationships & communication		
Participants: Who was involved? Who are the key parties?	How do participants engage with each other What behaviours are required for engagement? How do conditions and behaviours interact?	Sketching here helped to check understanding of communities of practice and usually revealed functional areas.
Who do you interact with? Who do you spend most time with? Who is the most important?		Asked also about use of email, phone and F2F
What was your relationship with them like?		
How engaged to you think they were?		
What helps or hinders interaction in relationships?		

Research aim: to investigate how public sector organisations engage with consultants in order to deliver value to an IT project		
Interview questions	**Research questions**	**Comment**
Where have you met people?		Context has an influence on engagement
Can you tell me about an **incident** that illustrates interaction or lack of it? Can you tell me about a time **when** relationships were really working well?		These answers may illustrate participation, and mutuality
Knowledgeability		These answers might reveal something of knowledgeability, contribution and adaptation.
What do you talk about with them? How important are these conversations?	How do conditions and behaviours interact? How does engagement produce value?	What the expertise is that is being exchanged.
Who do you go to for information?		People seek different information at different stages of the project. The answers indicate if the interviewee does talk with people.
What do you learn from each other?		
How are you using that knowledge?		
Value		
What value do you think people brought to the project?	How do conditions and behaviours interact? How does engagement produce value? What kind of value results from engagement and how is it produced?	
What challenges did you face? Can you tell me (a story of) how were they overcome?		Answers may demonstrate engagement between parties to overcome challenges. Such stories might illustrate lack of participation, or less mutual participation.
What did / do the consultants contribute? What do the contractors contribute?		
What do consultants do that you can't? Why?		This question may be answered before being asked.
Can you think of something that you discussed outside the workplace?		– networks outside of work
How does engagement bring value?		

8.8 Appendix 8: research requirements and methodology

This is a study of how consultants add value to public organisations. I am studying how people work together to deliver value to an IT project so I am looking for IT projects where consultants are involved.

Study aims

Through conversation and observation to learn:

- how use of consultants might deliver value to the public sector
- about the structure of relationships
- how value might pass between people

Ways of collecting information

I would like to learn through conversations with people involved in a public sector IT project. This would involve:

- visiting you at your convenience (and my expense) for conversations that would take about an hour each. The people to discuss with would be in roles such as project owner, project manager, responsible politician, user, consultant. Speaking with one person might lead me to ask to speak to another.
- Sketches of who interacts with whom
- Photos of places where people meet & exchange information
- Notes
- Observation e.g. meetings
- Shadowing a day or two? A week?

Output

I will be happy to share my immediate findings with you. The later combined results of the study might be relevant to you in helping public organisations and consultants to work together. The main output will be a report for a doctoral thesis.

I will keep organisations' names confidential as well as what any individual says to me. All organisations will be anonymised. I will also anonymise each individual that I speak to so that within the organisation it should not be possible to identify who said what.

Contact

Liz Hartnett, MBA, Master of Research, Member of BCS
Tel: 01908 655699
Email: e.j.hartnett@open.ac.uk
The Open University Business School
Michael Young Building (B2),
Walton Hall, Milton Keynes, MK7 6AA

8.9 Appendix 9: research study information sheet

You are being invited to take part in a research study. Before you decide whether to take part, here is some information about it.

Project title
How consultants and clients can engage effectively to produce value in public sector IT projects.

Researcher
Liz Hartnett, BA, MBA
Tel: 01908 655699
Email: e.j.hartnett@open.ac.uk

The Open University Business School
Michael Young Building (D1),
Walton Hall, Milton Keynes, MK7 6AA

About this study
This research explores how public organisations deliver value from the use of external consultants in order to find out if how engagement between client and consultant happens during a project and if engagement helps to add value. The Open University Business School is funding this study as part of a doctoral thesis.

You have been asked to take part in the study because of your role in a public organisation working on an IT project that involves external consultants.

This study is expected to take place over a few days or a week, requiring visits and conversations with managers, consultants and those working with consultants. Observation of work or shadowing might also happen. Photos of places where people meet might be taken.

Results could identify arrangements and behaviour that improve value in projects such as knowledge of how to add value to a client's project. Feedback might also lead to:

- improved trust, engagement and collaboration
- support collaborative activities
- add value and transparency to projects
- improved accountability for work.

If you have questions you want answered or a complaint to make you could talk to a senior member of The Open University Business School, **Dr. Kirstie Ball** is the Director of Research Programmes at the Business School and her direct line is **01908 655669**.

Do I have to take part?
Taking part in research is voluntary. If you do decide to take part, you will be given this information sheet to keep and be asked to sign a consent form. You are still free to withdraw at any time by simply saying so and without giving a reason. You are free to refuse to answer questions.

Confidentiality
Taking part in a research study involves giving information to the researcher, which may be answers you give to questions about your work, your role or your perception of the organisation. You have the right to expect that your personal details will be kept secure and confidential but also neither you nor your organisation will be identifiable in any reports or articles I write.

You will be asked to sign a consent form that should include the study title, my name, Liz Hartnett, as principal researcher and details of how to make a complaint if necessary. You should have a copy of the form you to keep.

At the end of the study

The results of the study will be used to write an account to this organisation of the findings. Combined results from a number of organisations will be used to write a broader account. Some of the results may be used for case studies, teaching and academic papers. The main output will be a report for a doctoral thesis.

The Open University

From John Oates
Chair, The Open University Human Participants and Materials Research Ethics Committee
Research School
Email j.m.oates@open.ac.uk
Extension 52395

To Elizabeth Hartnett (PI) research student OUBS

Subject How public sector organisations manage consultants in order to contribute value to an effective consultancy project

Memorandum

Ref HPMEC/2008/#490/1
Date 17 October 2008

8.10 Appendix 10: ethics approval

This memorandum is to confirm that the research protocol for the above-named research project, as submitted on 1st October 2008, is approved by the Open University Human Participants and Materials Ethics Committee, subject to satisfactory responses to the following:

You are asked to:

Produce separate information sheet and consent form including reference to participants being able to ask for their data to be destroyed up to a defined point, for example two weeks after the completion of data collection from them. The consent form should state that the intention is to record interviews but the participant has the option to decline the recording. The consent form should give contact information for another person, such as the primary supervisor, in case a participant wants to talk to someone else about the research. The participant should be asked if they will assign copyright for their contribution to be used in education, research and publication.

Always inform someone when and where you will be interviewing.

Consult the Data Protection officer within OUBS regarding your data handling and the requirements of the Data Protection Act.

At the conclusion of your project, by the date that you stated in your application, the Committee would like to receive a summary report on the progress of this project, any ethical issues that have arisen and how they have been dealt with.

John Oates
Chair, OU HPMEC

8.11 Appendix 11: consent form

Study into consultancy value

Project title: How clients and consultants work together on public IT projects

Agreement to participate

I, _____ (print name)

agree to take part in this research project.

I have had the purposes of the research project explained to me.

I have been informed that I may refuse to participate at any point by simply saying so. Participation is voluntary and I am free to withdraw from the research any time. I am free to refuse to answer questions.

I have been assured that my confidentiality and that of my organisation will be protected as specified in the information leaflet

I agree that the information that I provide can be used for educational or research purposes, including publication.

The interview will be audio-recorded. However, I have the option to decline the recording. I can request destruction of the recording up to two weeks after it is made.

I understand that if I have any concerns or difficulties I can contact **Liz Hartnett** at 01908 655699. If I wish to complain about any aspect of my participation in this project, I can contact **Dr. Kirstie Ball**, who is the Director of Research Programmes at the Business School and her direct line is: **01908 655669**.

I assign the copyright for my contribution to the researcher for use in education, research and publication.

Signed: _____ Date: _____

8.12 Appendix 12: field work equipment

For the full interviews:

- Digital voice recorder
- Informed consent form
- Interview schedule
- Information sheet

For observation

Field diary to record activities of research, impressions, procedures location, office layout, interview experiences

Camera to capture images of working environments, although there was little opportunity to use it due to security restrictions on premises or personal privacy issues

8.13 Appendix 13: coding structure

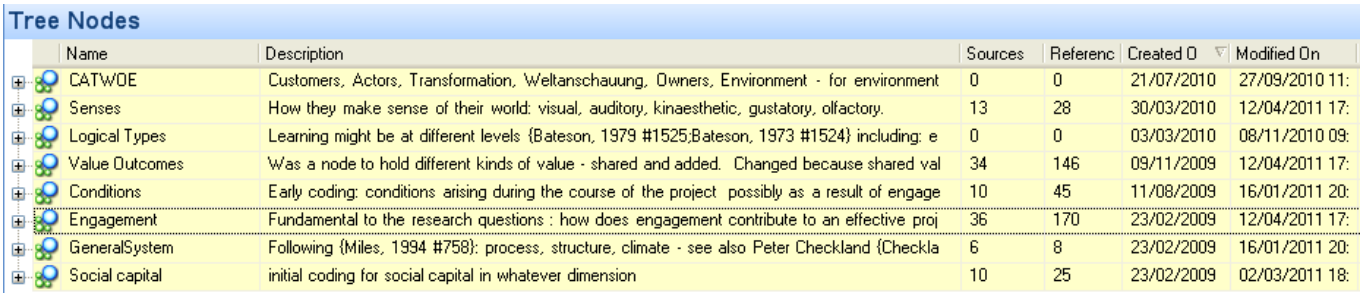
This appendix includes the final tree node for engagement and lists other tree nodes developed during analysis.

8.13.1 Tree nodes

Key to numbers: Sources are underlined; *references are italicised.*

Table 8-7: structure of engagement coding

Engagement		36	*170*				
Tree Node	**Conditions Of Engagement**		0	*0*			
	Tree Node	*Communication*		35	*438*		
		Tree Node	Participation	Yes	33	*420*	
		Tree Node	Environment	Yes	40	*255*	
			Tree Node	Time		14	*78*
			Tree Node	Place		15	*71*
			Tree Node	Boundary object		25	*107*
	Tree Node	*Knowledgeability*		37	*451*		
		Tree Node	Expertise		36	*478*	
		Tree Node	Contribution		38	*534*	
Tree Node	**Emerging Behaviours**		0	0			
	Tree Node	*Sense_making*		36	*415*		
		Tree Node	Cues		13	*32*	
		Tree Node	Plausibility		14	*45*	
		Tree Node	Enactment		16	*132*	
		Tree Node	Retrospect		18	*35*	
		Tree Node	Identity		18	*46*	
		Tree Node	SocialContact		20	*138*	
		Tree Node	OngoingEvents		20	*97*	
	Tree Node	*Sharing*	Yes	38	*503*		
		Tree Node	Power		18	*56*	
		Tree Node	Risk		18	*34*	
	Tree Node	*Adapting*	Yes	39	*296*		



Tree Nodes

	Name	Description	Sources	Referenc	Created O	Modified On
⊞	CATWOE	Customers, Actors, Transformation, Weltanschauung, Owners, Environment - for environment	0	0	21/07/2010	27/09/2010 11:
⊞	Senses	How they make sense of their world: visual, auditory, kinaesthetic, gustatory, olfactory.	13	28	30/03/2010	12/04/2011 17:
⊞	Logical Types	Learning might be at different levels {Bateson, 1979 #1525;Bateson, 1973 #1524} including: e	0	0	03/03/2010	08/11/2010 09:
⊞	Value Outcomes	Was a node to hold different kinds of value - shared and added. Changed because shared val	34	146	09/11/2009	12/04/2011 17:
⊞	Conditions	Early coding: conditions arising during the course of the project possibly as a result of engage	10	45	11/08/2009	16/01/2011 20:
⊞	Engagement	Fundamental to the research questions : how does engagement contribute to an effective proj	36	170	23/02/2009	12/04/2011 17:
⊞	GeneralSystem	Following {Miles, 1994 #758}: process, structure, climate - see also Peter Checkland {Checkla	6	8	23/02/2009	16/01/2011 20:
⊞	Social capital	initial coding for social capital in whatever dimension	10	25	23/02/2009	02/03/2011 18:

Figure 8-2: tree nodes

8.13.2 List of coding queries

CQ_Value
CQ_trustSharing
CQ_SharingValue
CQ_SharingSenseMakingTrust
CQ_SharingSenseMaking
CQ_SharingAdapting
CQ_SenseMakingValue
CQ_SenseMakingAdapting
CQ_SenseMaking
CQ_ParticipantsSharing
CQ_ParticipantsSenseMaking
CQ_KnowledgeabilitySenseMaking
CQ_KnowledgeabilityEmergingBehaviour
CQ_EnvironShare
CQ_EnvironSenseMaking
CQ_EnvironmentSenseMaking
CQ_engagement
CQ_ContribAdapt
CQ_CommunicationSharing
CQ_CommunicationSensemaking
CQ_communicatingANDsharing
CQ_BoundaryObjects
CQ_AdaptingValue
CQ_AdaptingKnowledgeability
CQ_AdaptingConditions
CQ_AdaptingCommunication
CQ_Adapting

8.14 Appendix 14: sources

Table 8-8: sources

Source	Case Study	Org Type	Source Type
1 : A - strategy	A	Island	Case
2 : CEO IS dept	A	Island	Web
3 : CEO	A	Island	Email
4 : Changing Government	A	Island	Document
5 : Consultant CEO	A	Island	Transcript
6 : Developer	A	Island	Transcript
7 : Developer	A	Island	Email
8 : e-services	A	Island	Transcript
9 : ICT guide	A	Island	Document
10 : ICT in Gov Memo	A	Island	Document
11 : Meeting room	A	Island	Photo
12 : Programme Manager	A	Island	Transcript
13 : Team work	A	Island	Photo
14 : Technical expert	A	Island	Transcript
15 : Tester T	A	Island	Transcript
16 : Tester	A	Island	Email
17 : B - project management	B	Island	Case
18 : Business & systems manager	B	Island	Transcript
19 : RE consultancy value	B	Island	Email
20 : Business director	B	Island	Transcript
21 : RE Consultancy value Jack	B	Island	Email
22 : CaseStudy2team	B	Island	Document
23 : CEO IT dept	B	Island	Notes from web
24 : CEO	B	Island	Email
25 : Customer Services Manager	B	Island	Transcript
26 : ICT guide	B	Island	Document
27 : IT PM	B	Island	Transcript
28 : IT user	B	Island	Transcript
29 : RE Consultancy value research	B	Island	Email
30 : VRL Closing Doc	B	Island	Document
31 : VRLS_PID	B	Island	Document
32 : C - options appraisal	C	Local government	Case
33 : IT consultant	C	Local government	Notes
34 : IT consultant Sl	C	Local government	Notes

Source	Case Study	Org Type	Source Type
35 : IT manager CSF	C	Local government	Contact summary form
36 : IT Manager	C	Local government	Transcript
37 : IT support CSF	C	Local government	Contact summary form
38 : IT Support	C	Local government	Transcript
39 : IT User	C	Local government	Transcript
40 : PID	C	Local government	Document
41 : Review summary	C	Local government	Document
42 : Two-page summary	C	Local government	Document
43 : Case Study 4	Unassigned	Local government	Case
44 : SAP_IT Manager	Unassigned	Local government	Transcript
45 : SAP_PM	Unassigned	Local government	Transcript
46 : Case Study 5	Unassigned	Central government	Case
47 : CSF_ Procurement Manager	Unassigned	Central government	Contact summary form
48 : Procurement Manager	Unassigned	Central government	Transcript
49 : Case Study 6 SRM	Unassigned	Central government	Case
50 : SRM Person	Unassigned	Central government	Transcript
51 : D - IT supply	D	Central government	Case
52 : 2009-10-28 Supplier Ops Com Observations Anon	D	Central government	Observation
53 : Account Director	D	Central government	Transcript
54 : Blog IT Head	D	Central government	Notes
55 : CS7 RE Quoting working here	D	Central government	Email
56 : CS7 tpl_capita90.asp	D	Central government	Web
57 : Delivery Director	D	Central government	Transcript
58 : Engagement Lead	D	Central government	Transcript
59 : Government Office SBS and PBS comparison	D	Central government	Email
60 : IT User Director	D	Central government	Transcript
61 : Notes Meeting Supplier	D	Central government	Notes
62 : Projects Lead	D	Central government	Transcript
63 : SCRM	D	Central government	Transcript
64 : Supplier Entry	D	Central government	Other
65 : E - systems analysis	E	NDPB	Case
66 : Consultancy Consulting ToR for OFS v3	E	NDPB	Document
67 : Consultancy ToR for OFS	E	NDPB	Document
68 : CS8 RE Query prints service	E	NDPB	Email
69 : CS8 user	E	NDPB	Notes

Source	Case Study	Org Type	Source Type
70 : Email recent contract	E	NDPB	Email
71 : FW CS8 clarifying conversation.eml	E	NDPB	Email
72 : ISD Head	E	NDPB	Transcript
73 : IT Architect	E	NDPB	Transcript
74 : Manager Architecture	E	NDPB	Transcript
75 : NDPB011BW_notice	E	NDPB	Photo
76 : NDPB018BW_room	E	NDPB	Photo
77 : Board & table	E	NDPB	Photo
78 : Flipchart and window	E	NDPB	Photo
79 : Meeting room	E	NDPB	Photo
80 : Open plan	E	NDPB	Photo
81 : Open plan 2	E	NDPB	Photo
82 : Meeting room notice	E	NDPB	Photo
83 : Workspace in corner	E	NDPB	Photo
84 : Corner desks	E	NDPB	Photo
85 : Wall reminders	E	NDPB	Photo
86 : Procurement Manager	E	NDPB	Transcript
87 : Project Manager	E	NDPB	Transcript
88 : User PM	E	NDPB	Transcript
89:IT consultancy executives	Not applicable	Consultancy	Notes from several discussions
90: Ex-consultant to public sector	Not applicable		Notes
91: IT data consultant specialist	Not applicable	Consultancy	Notes
92: Public servant from OGC	Not applicable	Central government	Notes

8.15 Appendix 15: case B: Governance & structure of project

Structure of

ISLAND VEHICLE REGISTRATION AND LICENSING PROJECT

STEERING GROUP	IT SERVICE PROVIDER
CLIENT - DEPARTMENT OF TRANSPORT HIGHWAYS DIVISION	TREASURY ISD
C W I Director of Highways	Ben Robinson* IT Director
K. Mese Director of Management Services	Bob Tepman, Project Manager
Mrs E Lemon, Project Coordinator	Tom Young
Mrs N Lee, Customer Services Manager	
Katie Hame, Home Affairs	

* All names are pseudonyms for anonymity

PROJECT TEAM

The Project Team provided experience of the existing system and requirements for the new system to the IT developers (Agent/Developer Company) and Project Manager. The Project Manager, the Customer Service Manager and the DoT IT Project Manager provided approvals and reports to the Steering Group.

Bob Tenshill	Project Manager	Cameron DeTranche	Agent from supplier 5
Nora Lee	Highways Customer Service Manager	Nazir Iobuyev	Developer company (supplier 4)
Jack D	Business systems manager (BSM), DoT IT Project Manager		
Terry Y	Post Office Licensing Manager		
Katie Hame	Licensing officer		

8.16 Appendix 16: client types

Clients could be primary, ultimate, contact, unwitting, indirect, intermediate or ignored. Some clients were contractors as this matrix shows. The matrix came from running a matrix query on the NVivo database that checked client type attributes against role attributes.

Table 8-9: client roles and types

Role	= Contractor	= Consultant	= Client	= IT Supplier
Client Type				
1 : = Primary	1	0	5	0
2 : = Ultimate	0	0	3	0
3 : = Contact	0	0	8	0
4 : = Unwitting	3	0	1	0
5 : = Indirect	0	0	2	0
6 : = Intermediate	0	0	3	0
7 : = Ignored	0	0	0	0

The matrix shows a spread of client types, most of the interviewees being contact clients. It is not surprising that there is no evidence of ignored clients, as it is possible that ignored or forgotten clients (Sturdy et al., 2009: 179) are also undiscussable and not recognised. The matrix also indicates that in some cases contractors were consultants' clients.

The table is useful for showing that the research data includes interviews with a number of different types of client.

8.17 Appendix 17: tables of actions for engagement

The National Audit Office used tables to advise on engagement between clients and consultants (NAO, 2006b). The format was based on a detailed framework, developed by the NAO, in collaboration several experts on the consulting industry. The bold headings are also in the NAO framework. These tables provide an overview of the key actions clients and consultants took for each case.

Table 8-10: case A actions for engagement

(NAO, 2006b)	**With client staff on project**	**With consultant staff on project**
Actions clients take	✓ .... in order to ensure client staff are committed to the project ✓ rang if they needed to talk ✓ set up mixed teams ✓ got balance of teams right between contractors and public servants ✓ Be clear about the aims of the overall project ✓ did an annual plan that linked back to the Government plan ✓ Maximise the value employees can add ✓ combined a lot of roles ✓ All pointed in same direction.	✓ …. in order to ensure consulting staff are committed to the project ✓ Exchange information with key suppliers ✓ Client managers offered the contractors a copy of the same plan ✓ Clients shared the plan with contractors ✓ Clients managed [developer]'s output ✓ Clients regarded contractor team members as holding shared objectives, ✓ looked at one common way of thinking and delivering
Actions consultants take	✓ Actively involve client staff ✓ Consultants spared time and made sure they were free ✓ Contractors and consultants were part of the teams but in a different way so providing a counter-culture. ✓ Consultants educated clients how to take a long term view ✓ Consultants managed personalities ✓ got people to understand ✓ spent time with people ✓ influenced clients / got clients committed ('*on board'*) ✓ consultants took departments back on track	✓ Change the attitude of consultants towards clients ✓ Consultants bounced ideas off each other in order work out how to manage stakeholders in the project and influence key participants.

[1] Andrew Sturdy at the University of Warwick, Tim Clark at Durham Business School, Heidi Gardener at London Business School, Tim Morris at Said Business School in Oxford and Karen Handley at Oxford Brookes University helped in developing this framework for the NAO.

(NAO, 2006b)	With client staff on project	With consultant staff on project

A circle = neutral action, a tick ✓ = positive action, a cross × = negative or lack of action.

Table 8-11: case B actions for engagement

(NAO, 2006b)	With client staff on project	With consultant staff on project
Actions clients take	✓ .... in order to ensure client staff are committed to the project ✓ Clients grew with the project ✓ Clients learned together some clients gained personally from the success of the project ✓ Be clear about the aims of the overall project ✓ Clients followed a project methodology ✓ Tried to get coinciding priorities ✓ Clients & contractors understood each other ✓ Maximise the value employees can add ✓ × Operational participants were allocated based on who was available as well as on who knew the old system best. Allocation of resources for testing also delayed the project. The director was the one with the power to allocate resources and he stopped participating in the steering group meetings. However, by not participating, he was not available to deal with resource issues.	✓ …. in order to ensure consulting staff are committed to the project ✓ Exchange information with key suppliers ✓ Clients learned from developers ✓ × Clients lowered targets. "*I felt that too quickly the contingencies became the preferred option and the steering group did not have sufficient understanding of the business or the issues to properly question or challenge what was put before them*." ✓ × BSM did not understand or did not agree the aims & constraints of this IT project and could not match his business aspirations to the technical constraints
Actions consultants take	✓ Actively involve client staff ✓ Consultant PM was available to help different parties share a common language ✓ Consultant PM built up relationships ✓ Consultant PM did a stakeholder analysis ✓ Consultant PM needed to make sure stakeholders were positive	✓ Change the attitude of consultants towards clients ✓ Consultant PM recognising the BSM's aims and concerns for the product escalated them to the steering board. ✓ Consultant PM used CEO as a sounding board

A circle = neutral action, a tick ✓ = positive action, a cross × = negative or lack of action.

Table 8-12: case C actions for engagement

(NAO, 2006b)	With client staff on project	With consultant staff on project
Actions clients took.	✓ .... in order to ensure client staff are committed to the project ✓ IT manager had hands-on responsibility for the project, ✓ Be clear about the aims of the overall project ✓ IT manager defined the benefits of using the consultant and communicated them to stakeholders. ✓ The IT manager evaluated the consultant's work post project. ✓ Maximise the value employees can add ✓ The IT manager may have gained personally from the successful consulting project through being able to save the organisation hundreds of thousands of pounds – demonstrating her management skills. ✓ The IT support was chosen to work with the consultant despite having other work commitments & watched how she worked ✓ The IT support and other software developers gained because the system they knew would not change so there was not the need for new training.	✓ …. in order to ensure consulting staff are committed to the project ✓ IT manager missed checking that the IT support was learning from the consultant ✓ Exchange information with key suppliers ✓ The consultancy organisation was involved prior to the procurement phase of the project ✓ The consultant input at the scoping stage of the project agreeing terms of reference. ✓ IT manager exchanged information with the consultant to build understanding with the consultant of her aims and constraints ✓ IT manager described her stakeholders' personalities, aims, potential reactions knowledge & contributions they could make beforehand ✓ IT manager shared the process of the appraisal and its results with the incumbent IT supplier. ✓ used the information to renegotiate with suppliers ✓ × IT manager did not realise consultant's lack of active training to IT support
Actions consultants take	✓ Actively involve client staff ✓ Consultant was flexible in her approach to her interviewees, and with the IT manager, her primary client with whom she built a relationship ✓ wanted to know about each of her interviewees & prepared for interaction ✓ Avoided micro-management ✓ responded to issues ✓ Consultant persuaded everybody to look at the same document, persuading all client stakeholders to think at the same level ✓ put down options to go forward with × Consultant did not actively coach the IT support in interviewing and consultancy skills.	✓ Change the attitude of consultants towards clients No other consultants from this consultancy were at this organisation at this time.

(NAO, 2006b)	With client staff on project	With consultant staff on project

A circle = neutral action, a tick ✓ = positive action, a cross ✗ = negative or lack of action.

Table 8-13: case D actions for engagement circa 2007-8

(NAO, 2006b)	With client staff on project	With consultant staff on project
Actions clients take	✓ .... in order to ensure client staff are committed to the project × expectations had been unreal ✓ Be clear about the aims of the overall project × aims were unclear or not articulated × this was a long term contract nearing its end × People argued about money	✓ …. in order to ensure consulting staff are committed to the project ✓ Exchange information with key suppliers × meetings were formal and recorded × there was little interactive dialogue Incentivise the consulting firm × did not share plans with any external suppliers, but insisted on restricted documents × Had a philosophy of changing requirements regardless of business justification
Actions consultants take	Actively involve client staff × The software development approach was less interactive than some approaches.	✓ Change the attitude of consultants towards clients × Supplier attitude was to maximise profit

A circle = neutral action, a tick ✓ = positive action, a cross × = negative or lack of action.

Table 8-14: case D actions for engagement 2009-2010

(NAO, 2006b)	With client staff on project	With consultant staff on project
Actions clients take	✓ .... in order to ensure client staff are committed to the project ✓ Set up a blog and allow comments for feedback ✓ Shared ideas on the blog "*I would like to thank all the bloggers who took the time to share their thoughts, comments, ideas*" ✓ Debated internal IT's performance on the blog ✓ Contacted "*each individual blogger, where possible, to discuss the points they raised."* ✓ Become available for informal interaction ✓ Supplier's work was evaluated post project ✓ Be clear about the aims of the overall project ✓ Articulate requirements about deliverables ✓ Become clear about aims of the project including business aims ✓ set clear standards ✓ replaced people because they needed the right fit, ✓ spoke in the same voice ✓ ensured that [Account Director name] understood how the public sector worked, so [Account Director name] could be better able to position the services ✓ Looked "to find a way that gives us both..." and compromised ✓ sat down and talked ✓ had off the record discussions ✓ realised they had the same set of values and the same sets of understanding ✓ Maximise the value employees can add ✓ exchanged or shared information ✓ had a relationship that allowed people to help and allowed trust ✓ The customer director invests in in-house technical skills and recruiting people with them	✓ …. in order to ensure consulting staff are committed to the project ✓ Exchange information with key suppliers ✓ Involves IT supplier in discussion prior to renewing contract ✓ Develops an interactive dialogue that allows opportunities to explore and challenge assumptions ✓ Exchanges understanding of aims and values of their respective organisations ✓ came together to sort out a single plan ✓ moved one way, then in the other ✓ Suppliers reputation was risked ✓ realised that "*values that they have are absolutely the same as our own*" ✓ found what was key for each and aligned that ✓ took risks together ✓ agreed ✓ all spoke with a united voice ✓ Clients elaborated on their requirements ✓ Everyone needed to know common aims and suppliers had to be allowed to see restricted documents. ✓ Created plans which kept everyone on the same page & ensured plans linked up, and milestones coming through ✓ talked to each other ✓ were working together ✓ wanted to make it succeed ✓ matched each other's values ✓ wanted to do this Incentivise the consulting firm ✓ Clients met their obligations, created a philosophy of not changing requirements and paid contractors that the supplier managed. ✓ Supplier collaboration was recognised through the award

(NAO, 2006b)	With client staff on project	With consultant staff on project
	✓ Senior managers have hands-on responsibility ✓ got people to work together ✓ invested effort in the relationship	
Actions consultants take	✓ Actively involve client staff ✓ Account director was one of the catalysts to change. "*He's adopted a much more of a can do approach"* ✓ Account director attempted to change those stakeholders that did not fit into the right box in the two by two, of the power and influence matrix. ✓ Suppliers treated clients as serious commercial clients ✓ Suppliers performed & delivered, thus gaining credibility ✓ Supplier demonstrated credibility and sincerity in order to build up trust. ✓ Clients and supplier team share a common language and interact to learn to discover it ✓ Suppliers listened ✓ Both client and suppliers spoke in the same voice ✓ Suppliers reduced the margin and took risks together to help the client's budget ✓ Looked "*to find a way that gives us both...*", so they compromised ✓ moved one way, then in the other ✓ sat down and talked ✓ had the off the record discussions ✓ had the same set of values and the same sets of understanding ✓ The software development approach is flexible	✓ Change the attitude of consultants towards clients ✓ AD pep-talks development teams ✓ Supplier management reminded supplier staff of the client perspective. "*what I try and tell people within [Supplier] is you need to think about where they're coming from*" ✓ Supplier recognises client's need to cut costs. ✓ Supplier's notices on hot-desks about security demonstrated sensitivity to organisation ethos.

A circle = neutral action, a tick ✓ = positive action, a cross ✗ = negative or lack of action.

Table 8-15: case E actions for engagement

(NAO, 2006b)	With client staff on project	With consultant staff on project
Actions clients take	✓ .... in order to ensure client staff are committed to the project ✓ Prepared staff ✓ Be clear about the aims of the overall project ✓ ISD team agreed objectives, so were clear about overall aims of the project ✓ Use of consultancy is limited to call-offs on an existing procurement framework ✓ Prepare the ground for the use of consultants ✓ IT PM prepared the ground when he introduced the consultant to the staff, setting expectations ✓ AM learned reflective listening so gained personally	✓ …. in order to ensure consulting staff are committed to the project ✓ Exchange information with key suppliers ✓ Consultant was involved at procurement stage, and expected to input to scoping the project ✓ Briefed & identified when brief was agreed ✓ Understanding of constraints of report was built into reviews ✓ ISD head, IT PM & supply PM contributed to the report
Actions consultants take	✓ Actively involve client staff ✓ Consultant recognised his primary stakeholder ✓ Consultant coached architect in reflexive approach ✓ Avoided micro-management ✓ Consultant used relationships to contact informants ✓ Consultant asked for recommendations of who to talk to in particular areas of business, & what was the best way to approach people ✓ Consultant worked out how to present the information ✓ Consultant had separate meetings with people and worked around peoples' schedules. Consultant saw this person at the same time by sharing another's interview, ✓ Consultant and client talked together, ✓ Consultant used people in different ways according to their skills. ✓ Consultant helped the NDBP understand where certain of its systems were, before being replaced by a new system. ✓ Consultant picked up on culture of the NDPB & its politics & changed his way of working being careful of who he talked to and what he said ✓ Consultant was flexible enough to work differently with different people. *(adaptability)* and changed slants on the questions, depending on who interviewing ✓ Consultant knew [the Head of ISD] was his key stakeholder and therefore he made sure that he understood what it was [the Head of ISD]	✓ Change the attitude of consultants towards clients ✓ Sensitive to the political ethos of the different departments ✓ Used informal relationships to see the wider picture ✓ Talked to his colleague

(NAO, 2006b)	With client staff on project	With consultant staff on project
	expected ✓ Consultant came to the line manager if there was any problems and learned ✓ Consultant worked with people rather than for people	

8.18 Appendix 18: tables of emerging behaviours

The following table shows some examples of participants' sharing

Table 8-16: actions for sharing

Activity	Material or context	Consequence	Case study
Set up mixed teams	Procurement contracts, combining roles	Common norms & regarding members as holding shared objectives	A
Speak, bounce ideas off	Face-to-face, email, phone, meetings	Gain cues to solve problems	A
Discuss plan that links back to the Government plan with the developers	Plan, time	Find common way of thinking and delivering	A
Hear things, say things	Open and honest way	Create trust	A
be open and honest	Time	help the working relationship	A
build the relationship	Time	improve team work	A
commit to doing something		create trust	A
comply with checkpoints	Time	Complete project	A
Contact & talk about project with stakeholders	Phone, meetings, F2F, email, meetings widening circle of those involved	Obtain information, ideas on handling project issues, requirements	B
Introduce, ask questions,	Time, interviews,	Learn system requirements, and people's views	C
Set up, write to, read, reply between clients	Blog	Learn about IT support	D
encourage consultant/ supplier staff	Presentation slides, time, place	Inform, praise	D
Create, agree,	Single plan with aims, objectives, milestones	Allow decisions	D
Implement decisions	Power throughout the delivery chain	Deliver	D
People coming together	same time, place	forge relationships, build trust	D
Work together	Plans, documents	Agree common plans, build trust	D
risk revenue	Trust	develop the project together	D
Use interpersonal skills	Time, F2F	get people to trust you and talk openly	E
Collaborate though talk	Regular meetings	make sure ISD is delivering what the business needs	E
find common value		build trust	E
"piggybacked on his interview"	Other consultants, time, space	save people time	E

The case study data above in Table 8-16 shows that sharing information, experience and knowledge allows sense-making behaviour to emerge.

Sharing allows participants to start to make sense of each other's perspectives, attitudes, values and plans. Weick identified seven properties of sense making: identity, retrospection, enactment, social, ongoing, extracted cues, plausibility. Some examples of actions that helped making sense are in Table 8-17.

Table 8-17: actions to make sense

Example	Weick's properties:	Source	Case study
I understand that ISD want to make this happen and if I listen to what you're saying so I can understand what you're trying to make happen what I need to do is to find a way of making these two things come together. a lot of my time is very gently trying to make those things come down one way or the other	Enactment	Consultancy CEO	A
Everything I do is the gentle bits round the outside to make sure these things come together and work.	Enactment	Consultancy CEO	A
He would just – he would take our normal speak and perhaps not being able to describe things very well. He would interpret it and put it in very clear English	Enactment	CSM	B
Let's involve them in a consultation process and let's see what their requirement is	Enactment	PM	B
take what they said and put that into a cogent set of requirements that everybody would understand	Enactment		C
Everything I do is extremely soft.	Identity	Consultancy CEO	A
I know when I'm doing a good job. I personally know from experience. I've been a project manager for ten years.	Identity	PM	A
I have to hear things that I don't want to hear about my team, whether that's ISD or [Consultancy] and also it means that I have to say things sometimes that they don't want to hear and we have to do so in an open and honest way	Identity	Consultancy CEO	A
if you give them a problem, they can - or they'd come back and say you can do it this way or that way	Plausibility	CSM	B
Let's understand where we're going on that. And why is it this is going off track	Plausibility	Consultancy CEO	A
They could identify to us where they believe the similarities are.	Plausibility	IT PM	E
This is what we're trying to show by this research, by this analysis. This is the point we're trying to make.	Plausibility	IT consultant	E
Are our viewers' comments valid or not? Would their comment be more appropriate for a different document, for a different audience?	Plausibility	Manager architecture	E
It's the techie talk, because sometimes you wouldn't understand quite what they were wanting and why they wanted because they were thinking differently, they were thinking logically and were thinking of computer logic and not thinking like we do. I suppose I learnt may be we have to think slightly differently	Extracted cues	Consultancy CEO	B

Example	Weick's properties:	Source	Case study
I say, "what are the success criteria for a project in terms of deliverables". Obviously, that's when you have the closedown document and say, well "what were the initial deliverables and how have they been delivered?" So, you can formally evaluate it that way.	Extracted cues, retrospection	PM	B
You know by getting vibes from people involved in the project. They will give you vibes as to whether they're happy. You'll know from the steering group whether or not also you can get vibes from them.	Social contact	PM	B
There are the corridor conversations which is just about, beware, you know, this is happening,	Social contact		D
She kind of fed back to us as this is what I'm looking at, does this make sense, in the initial stages.	Retrospection, social		C
We're kind of building up this kind of trio of the three of us. We kind of meet on a weekly basis just to see what's happening and see if there's anything that we need to be worried or concerned about	Ongoing events		D
I sit down with [the ISD BSM] once a week, with [the CEO] once a month to understand exactly what they're trying to get in terms of outcomes.	Ongoing events	Consultancy CEO	A
We then got the production services manager engaged, and the Chief Technology Officer in a dialogue, on our floor about what we think had happened and what the evidence of the challenges we faced in terms of what we'd been shown.	Cues	e-SM	A
trying to gauge get a … check with him that if I think something's priority	Cues	Tester PM	A
You know by getting vibes from people involved in the project. They will give you vibes as to whether they're happy.	Cues	Consultancy PM	B
We made a number of trial migrations we realised that the data in the old system was a terrible, terrible swamp	Cues	PM	B
the actual outcome, which was it will only make sense to stay with these guys if they can produce better prices	Cues	IT manager	C
we should have picked that up in our antennae before then	Cues	IT DD	D
I'm finding this kind of pattern, but he could not articulate exactly what it was	Cues	Head ISD	E
there were times when there was slippage but she was able to deal with me in challenging that by having perfectly good reasons why my organisation wasn't capable of handling our directives	Cues	IT manager	C
There was a feeling that there was a lot of duplication of functionality across the library, but no one had any evidence. Gut feel from people	Cues	IT consultant	E

A system for adapting provides the capability to act, the verb to adapt. The word 'adapt' matches the other verbs of behaviour. Weick (1995) argues that verbs capture "the action that lays down the path for sense making." People take action to adapt how they share their expertise, how they adapt to the situation and how they adapt to the people that they work with. The theoretical framework cites Orlikowski (2002) about aligning effort to combine information or experience. Material objects can

also be adapted to the needs of stakeholders (Star and Griesemer, 1989) so, for instance a project plan could be adapted when business change happens.

Table 8-18: actions to adapt

Example	Change	Consequences	Source	Case study
I felt I was getting bombarded with emails, can you phone this guy, chase this up, get this information for me, which is fine, because I knew that there was going to be a bit of that,	there were times when I had to sort of say to her, I'm sorry but I've got my day job I need to do, and I'm behind with that, and I'll come back to this later on. And I even had to at one point escalate it to my line manager	Email was written to the consultant to explain priorities.	IT support	C
We now pay providers from Swift, you know, we can't really make a mistake, basically.	And I hadn't really fully appreciated… I knew that you shouldn't make errors, but I hadn't really appreciated that as much before.	New learning	IT support	C
Different things, different systems computers the old system I knew inside out upside down back to front so It was all new.	I'm getting a bit old for all this stuff, but as it happened, I quite like it so I have to shut up now.	Here is an example of how the norms are changing and the discomfort that causes, which is quite normal in projects because projects do usually herald change, and change discomforts.	User	A
We made a number of trial migrations we realised that the data in the old system was a terrible, terrible swamp so	One thing that became evident was that there was a need for a data-cleansing project once this system went live.	A new project started after this one finished.	IT PM	B
That shortened requirements document was written for her so that she wouldn't have to read loads of stuff but she would still be happy.	No change	Here is an example of one party deliberately adapting a document in order to allow someone else to *avoid* adapting her time to read a longer document.	IT manager	C
if you brought that feedback down into things that they could control easily and things that they couldn't,	the things that they could control easily was how they engaged with us and how they responded to issues and things that aren't so easy	they significantly improved the first kind of thing and happily they continued to provide good service now even though they're going to be contracted	IT manager	C

Example	Change	Consequences	Source	Case study
	to control			
there would always be the two lines a bit like trench warfare, you go there and they'd go there being shot over	and it would be like no one would win, we were as bad as they were,	"and that's why the relationship had to change, be put on a different footing"	IT CM	D
Relationships are quite critical here, you know.	They had to take a decision to replace the person that they had in, in fact they replaced two of them, because they needed the right fit	Adapted participants	IT CM	D
We're having some problems with some of your guys on...	and we can then investigate them, see what the issue is and stop it before it becomes a festering.	Shared knowledge of what is going on allowed manager to adapt situation	IT DD	D
the structural change [...] So as soon as we were working with [the suppliers], then that made a big difference	because then we could get suppliers with a united voice saying, look we want to improve rather than everyone pointing fingers at each other.	"they didn't want to perform badly; it had got to a point where they didn't... pushed from pillar to post by various people, not joining up on our side, and you give up after a while – I'll just do what I'm told." This is an example of a negative cycle	IT UD	
that cycle is too long as well so when you do change, if you want to get to the point where you can write down your requirements	delivered in one step – here's the document, come back with a system –	"Then you need to get this so right that you spend ages doing it."	IT UD	D
You're trying to hit a moving target because business requirements are changing all the time	The example indicates that this change process takes time, hampered by changing requirements.	"You will never get a document exactly right, and when you go to suppliers, especially for a procurement process, that will take some time."	IT UD	D
if we haven't built a relationship all the way through there, allowing for change, then you'll never get it right.	having a few drinks and chatting.	And that's made a massive difference to the way we treat each other, to the way we interact,		

Example	Change	Consequences	Source	Case study
Work out who the key stakeholders are, understand their power and influence,	Attempt to change those that don't fit into the right box in the two by two, of the power and influence [matrix].	This supplier is deliberately controlling the environment by identifying participants who contribute positively to the project, and changing them.	SAD	D
why can't you adapt to it?	And it was that sort of philosophy we brought to it of not changing the product any more.	Programme participants adopted a new philosophy.	SEL	D
we were meeting, but it was reasonably frequent, where we could give some feedback and suggestions about how he steered, and what he was doing,	We had several iterations of the most crucial parts of the document.	The regular feedback led to adapting the document	Head ISD	E
He can do most of the work electronically because it's not so much impact on the business. I think if he kept going back there'll be a point that they'd go, come on, haven't you got it, and you're impacting us too much and that's not a daily job. [...] you have to do your homework, [...] so that people don't feel like, you know, think you go and wasted their time.	The consultant adapted his way of working to suit the business.	Less impact on the business	IT PM	E
the fact that business changes,	means that the project has to change, and if projects last more than six months then they need to change because the business environment changes, so they have to be flexible.	This concurs with other case studies where people have commented on business changes that can interfere with project development. It also supports the argument that IT strategy has to support business strategy.	IT PM	E
"The business is still dithering about what they want to do and we need to get on top of that. .. we want to get control..."		Dithering delays adapting.	ISD speaker in meeting	D

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